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DRAFT

NELLIS AIR FORCE RANGE RESOURCE PLAN and ENVIRONMENTAL IMPACT STATEMENT

CALIENTE RESOURCE AREA
CALIENTE, NEVADA

US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Las Vegas District

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

NEVADA STATE OFFICE
850 Harvard Way
P.O. Box 12000
Reno, Nevada 89520-0006

IN REPLY REFER TO:

1610
(NV-053)

May 24, 1989

Dear Reader:

Enclosed for your review and comment is the Draft Nellis Resource Plan (RP) and Environmental Impact Statement. This resource plan is an attempt to integrate the key natural resources into a single unified program of management, covering approximately 2.2 million acres of public land. Two alternatives, including the Preferred Alternative, were analyzed.

Your review and comment are needed at this time to ensure that your concerns have been considered in the planning process. Please direct written comments to Curtis Tucker, Area Manager, Caliente Resource Area, Bureau of Land Management, P.O. Box 237, Caliente, NV 89008.

Oral comments will be accepted at the following public meetings:

Date and Time		Location
July 18, 1989	7:00 P.M.	Lincoln County Annex 100 South 1 West Alamo, Nevada
July 19, 1989	7:00 P.M.	Tonopah Convention Center 301 Brougher Tonopah, Nevada
July 20, 1989	7:00 P.M.	Las Vegas District Office 4765 West Vegas Drive Las Vegas, Nevada

A time limit may be placed on oral comments, depending on the number of people who wish to make a statement. Oral comments should be accompanied by a written synopsis of the presentation. Written and oral comments will be fully considered and evaluated in preparation of the Proposed Resource Plan and Final Environmental Impact Statement.

If changes in the Proposed Resource Plan and Environmental Impact Statement are minor, it will only include those changes and will not be a full reprint of the Draft Resource Plan. For this reason, reviewers are requested to retain their copy of the Draft Resource Plan for use in conjunction with the Proposed Resource Plan and Final Environmental Impact Statement.

Sincerely yours,

Edward F. Spang
State Director

DRAFT RESOURCE PLAN

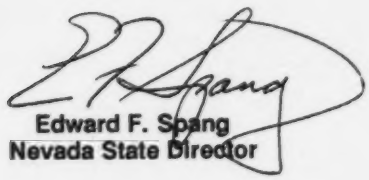
AND ENVIRONMENTAL IMPACT STATEMENT

for the

NELLIS AIR FORCE RANGE

PLANNING AREA

Prepared by the
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
LAS VEGAS DISTRICT



Edward F. Spang
Nevada State Director

The proposed resource plan is the long-range plan to manage approximately 2.2 million acres of public land within the Nellis Air Force Range Planning Area. The plan has been prepared in response to the Military Lands Withdrawal Act of 1986 (PL 99-606), and describes and analyzes the options for the management of natural and cultural resources of the withdrawn public lands in Nye, Lincoln, and Clark counties, Nevada. These lands have been withdrawn for use as a high- hazard military weapons training and testing area; management options are therefore limited and the Draft Resource Plan/Environmental Impact Statement reflects those limitations imposed by military use of the planning area.

For further information contact: Roger Alexander, Bureau of Land Management, Las Vegas District Office, P.O. Box 26569, Las Vegas, NV. 89126, or telephone (702) 646-8800.

Please submit written comments to Mr. Curtis Tucker, Area Manager, Caliente Resource Area, P.O. Box 237, Caliente, NV 89008 at the above address by September 1, 1989.

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TABLE OF CONTENTS

Page

SUMMARY S-1

CHAPTER 1- INTRODUCTION

PURPOSE AND NEED 1-1
LOCATION AND LAND STATUS 1-2
PLANNING PROCESS OVERVIEW 1-2
Identification of Issues 1-2
Development of Planning Criteria 1-3
Inventory and Data Collection 1-4
Analysis of Management Situation 1-4
Formulation of Alternatives 1-4
Estimation of Effects of Alternatives 1-4
Selection of the Preferred Alternative 1-4
Selection of the Proposed Plan 1-5
Monitoring and Evaluation 1-5
CONFORMANCE STATEMENT 1-5
CONSISTENCY WITH OTHER PLANS 1-5

CHAPTER 2- ALTERNATIVES

INTRODUCTION 2-1
ALTERNATIVES CONSIDERED IN THE PLAN 2-1
MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES 2-1
Lands Program 2-1
Access 2-2
Minerals 2-2
Soil, Water, and Air Resources 2-2
Vegetation 2-3
Forestry 2-3
Wildlife Habitat 2-3
Wild Horses 2-3
Livestock Grazing 2-3
Cultural Resources 2-4
Visual Resources 2-4
Recreation 2-4
Wilderness 2-4
Natural Areas 2-5
Areas of Critical Environmental Concern 2-5
Fire Management 2-5
ALTERNATIVE A - NO ACTION 2-5
Issue 1: Vegetation 2-5
Issue 2: Wildlife Habitat 2-5
Issue 3: Wild Horses 2-6

TABLE OF CONTENTS (Continued)

Page

ALTERNATIVE B - PREFERRED ALTERNATIVE 2-7
Issue 1: Vegetation 2-7
Issue 2: Wildlife Habitat 2-8
Issue 3: Wild Horses 2-8
Visual Resources 2-9
Areas of Critical Environmental Concern 2-9
ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS . 2-9
IMPLEMENTATION OF THE RESOURCE PLAN 2-10
MONITORING AND EVALUATION OF THE RESOURCE PLAN 2-11

CHAPTER 3- AFFECTED ENVIRONMENT 3-1

INTRODUCTION 3-1
PHYSICAL SETTING 3-1
LANDS 3-1
ACCESS 3-2
MINERALS 3-2
SOIL, WATER, AND AIR RESOURCES 3-2
VEGETATION 3-4
WILDLIFE HABITAT 3-6
SPECIAL STATUS SPECIES 3-7
WILD HORSES 3-7
LIVESTOCK GRAZING 3-8
CULTURAL RESOURCES 3-8
VISUAL RESOURCES 3-8
RECREATION 3-9
WILDERNESS 3-9
NATURAL AREAS 3-9
AREAS OF CRITICAL ENVIRONMENTAL CONCERN 3-9
SOCIAL AND ECONOMIC CONDITIONS 3-9

CHAPTER 4- ENVIRONMENTAL CONSEQUENCES

INTRODUCTION 4-1
ASSUMPTIONS FOR ANALYSIS 4-1
IMPACTS OF MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES . . 4-1
Lands 4-1
Access 4-2
Minerals 4-2
Soil, Water and Air Resources 4-2
Vegetation 4-3
Forestry 4-4
Wildlife Habitat 4-4
Wild Horses 4-5
Livestock Grazing 4-5
Cultural Resources 4-5
Visual Resources 4-5
Recreation 4-6
Wilderness 4-6

TABLE OF CONTENTS (Continued)

Page

Visual Resources 4-5
Recreation 4-6
Wilderness 4-6
Natural Areas 4-6
Areas or Critical Environmental Concern 4-6
Fire Management 4-6
Social and Economical Conditions 4-6
Unavoidable Adverse Impacts 4-6
Irreversible and Irretrievable Commitment of Resources 4-6
Relationship Between Short-Term Use and Long-Term Productivity 4-6
Cumulative Impacts 4-7
IMPACTS OF ALTERNATIVE A-NO ACTION 4-7
Vegetation 4-7
Wildlife Habitat 4-8
Wild Horses 4-8
Unavoidable Adverse Impacts 4-9
Irreversible and Irretrievable Commitment of Resources 4-9
Relationship Between Short-term Use and Long-term Productivity 4-9
Cumulative Impacts 4-9
IMPACTS OF ALTERNATIVE B-PREFERRED ALTERNATIVE 4-9
Vegetation 4-10
Wildlife Habitat 4-11
Wild Horses 4-11
Visual Resources 4-12
Areas of Critical Environmental Concern 4-12
Unavoidable Adverse Impacts 4-12
Irreversible and Irretrievable Commitment of Resources 4-12
Relationship Between Short-term Use and Long-term Productivity 4-13
Cumulative Impacts 4-13

CHAPTER 5- CONSULTATION AND COORDINATION

INTRODUCTION 5-1
PUBLIC PARTICIPATION 5-1
MILITARY INVOLVEMENT AND COORDINATION 5-2
CONSULTATION 5-3
PUBLIC REVIEW OF THE DRAFT 5-3

CHAPTER 6- PREPARERS AND REVIEWERS 6-1

APPENDICES

APPENDIX A- Military Lands Withdrawal Act (PL-99-606, PL-100-338) A-1
APPENDIX B- Five-Party Cooperative Agreement B-1
APPENDIX C- Summary of Agreements on Nevada Wild Horse Range C-1
APPENDIX D- Nevada Wild Horse Range Herd Area Management Plan D-1
APPENDIX E- Fire Management Memorandum of Understanding E-1

TABLE OF CONTENTS (Continued)

Page

APPENDIX G- Special Status Species List G-1
APPENDIX H- Mineral Resources H-1

GLOSSARY GL-1

REFERENCES R-1

MAPS

1 General Location 1-7
2 Planning Area 1-8
3 Visual Resource Management Classes 1-9
4 Valid Existing Rights 1-10
5 Vegetation Types 1-11
6 Wildlife Habitat 1-12
7 Special Status Species 1-13
8 Livestock Grazing Allotments/ Wild Horse Use Areas 1-14

TABLES

S-1 Summary of Alternatives S-2
S-2 Summary of Impacts S-4
3-1 Population and Projections 3-11
3-2 1986 Earnings by Major Industries 3-11
3-3 1986 Employment by Major Industries 3-12
6-1 List of Preparers 6-2
6-2 List of Reviewers 6-2

SUMMARY

SUMMARY

The Nellis Air Force Range Draft Resource Plan (DRP) and Draft Environmental Impact Statement (DEIS) explores future management options for the 2,209,326 acre planning area within Clark, Nye and Lincoln Counties in southern Nevada. This planning area is located in the Caliente Resource Area of the Bureau of Land Management's Las Vegas District, Las Vegas, Nevada. The need for the Resource Plan resulted from the passage of the Military Lands Withdrawal Act of 1986, as amended by Public Law (PL) 100-338, which withdrew the land for military purposes.

The DRP/DEIS is prepared as a single planning document to address the intensity of BLM resource management on the Nellis Air Force Range. Two alternatives are considered in detail: Alternative A (No Action Alternative) represents a continuation of current management direction within the framework of present laws and regulations, including existing Memoranda of Understanding and Cooperative Agreements. The No Action Alternative provides a baseline for the comparison of the environmental effects of the other alternatives. Alternative B, the Preferred Alternative, would direct management attention toward improving rangeland vegetative conditions and wildlife habitat by achieving and maintaining the appropriate management level for the wild horse population on the planning area.

The components of the two alternatives are summarized in Table S-1 and are further described in Chapter 2. The impacts anticipated from the alternatives are summarized in Table S-2 and are more fully described in Chapter 4.

TABLE S-1

SUMMARY OF ALTERNATIVES

RESOURCES	MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES	ALTERNATIVE A NO ACTION	ALTERNATIVE B PREFERRED ALTERNATIVE
LANDS			
ROWs	Issue ROWs.	Same	Same
Disposals	No lands available.	Same	Same
Authorizations	Issue authorizations.	Same	Same
ACCESS	Closed to public access.	Same	Same
	Access authorized on controlled basis.	Same	Same
MINERALS			
Mining	Valid existing rights recognized.	Same	Same
Oil/Gas Leases	No new locations/no new leasing.	Same	Same
SOIL, WATER, AIR			
Soils	Improve/Maintain.	Same	Same
Water	Meet standards.	Same	Same
Air	Meet standards.	Same	Same
VEGETATION	Protect T&E species.	Same	Same
	-	-	Develop Riparian Plan.
	-	-	If necessary, Build up to 50 miles fence.
FORESTRY	Products not available due to access restrictions.	Same	Same
WILDLIFE	Protect T&E species.	Same	Same
	Consult with NDOW & USFWS.	Same	Same
	Authorize predator control.	Same	Same
	-	-	Develop 20 waters
	-	-	If necessary, build up to 30 miles allot. bdry. fence
	-	-	If necessary, build up to 125 miles fence for NWHR
WILD HORSES	Manage according to Five-Party Agreement.	Same	Same
	-	Gather horses to AMLs.	Same
	-	Relocate wild horses.	Remove all wild horses outside NWHR.
	-	Develop at least 6 waters.	Same
	-	Remove all burros.	Same

TABLE S-1

SUMMARY OF ALTERNATIVES (CONTINUED)

RESOURCES	MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES	ALTERNATIVE A NO ACTION	ALTERNATIVE B PREFERRED ALTERNATIVE
WILD HORSES (CONTINUED)	-	-	Amend NWHR HMAP, as necessary.
	-	-	If necessary, Fence up to 75 miles Nellis boundary.
	-	-	If necessary, fence up to 125 miles of NWHR boundary.
LIVESTOCK GRAZING	Continue at authorized levels on Bald Mtn. Allot.	Same	Same
CULTURAL RESOURCES	Protect cultural resources as mandated by legislation, Federal regulations and Executive Orders.	Same	Same
VISUAL RESOURCES	Manage in accordance with Class III, IV requirements, Where applicable.	Same	Manage in accordance with Interim Class II and IV requirements, where applicable.
RECREATION	Access restricts recreation. Possible bighorn hunting Stonewall Mtn.	Same	Same
WILDERNESS	No areas meet criteria.	Same	Same
NATURAL AREAS/ ACECs	Timber Mtn. Caldera National Natural Landmark Area.	Same	Same
	No ACECs.	Same	Designate Timber Mtn Caldera National Natural Landmark as an ACEC.
FIRE MANAGEMENT	Existing MOU: Control naturally caused fires.	Same	Same
	Assist, upon request, with military caused fires.	Same	Same

TABLE S-2

SUMMARY OF IMPACTS

RESOURCE	MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES	ALTERNATIVE A NO ACTION	ALTERNATIVE B PREFERRED ALTERNATIVE
LANDS			
ROWs	None	Same	Same
Disposals	None	Same	Same
Permits/Leases	None	Same	Same
ACCESS	None	Same	Same
MINERALS	None	Same	Same
SOIL, WATER, AIR	Long-term impacts to soils on 1,276 acres from minerals and lands actions.	Same	Same
	Short-term impacts to water and air quality on 1,276 acres from minerals and lands actions.	Same	Same
	-	Long-term impacts to soils on 1,784,000 acres from wild horses.	Short-term impacts to soils on 394,000 acres from wild horses.
VEGETATION	Long-term impacts on 1,276 acres from minerals and lands actions.	Same	Same
	Short-term impacts on 37,175 acres from livestock grazing.	Same	Same
	-	Long-term impacts on 250 acres of riparian vegetation.	Long-term positive impacts on 250 acres of riparian vegetation and 3,600 acres of upland vegetation from fencing, if constructed.
	-	Long-term impacts on 1,784,000 acres from wild horses.	Short-term impacts on 394,000 acres from wild horses. Long-term positive impacts on 1,390,000 acres by removing wild horses. Short-term impacts on 509 acres from fencing, if constructed.
FORESTRY	None	Same	Same
WILDLIFE HABITAT	Long-term impacts on 1,276 acres of wildlife habitat from minerals and lands actions.	Same	Same
	Long-term impacts to wildlife at water sources utilized by wild horses or livestock.	Long-term impacts to 250 acres of riparian habitat from wild horse grazing.	Long-term positive impacts on 250 acres of riparian habitat from fencing, if constructed.
	-	Long-term impacts on 1,784,000 acres of wildlife habitat from wild horses.	Short-term impacts on 394,000 acres from wild horses.
	-	-	Long-term positive impacts on 1,390,000 acres by removing wild horses.
	-	-	Short-term impacts on 509 acres from fencing, if constructed.

TABLE S-2

SUMMARY OF IMPACTS (CONTINUED)

RESOURCE	MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES	ALTERNATIVE A NO ACTION	ALTERNATIVE B PREFERRED ALTERNATIVE
WILD HORSES	None	Retain 5,000 wild horses.	Remove 4,000 wild horses.
	-	Allow wild horses to utilize 1,784,000 acres.	Wild horses restricted to 394,000 acres, if fencing constructed.
LIVESTOCK GRAZING	None	Same	Same
CULTURAL RESOURCES	Non-discretionary minerals actions could impact cultural resources on up to 516 acres.	Same	Same
	Discretionary minerals and lands actions could impact cultural resources on 760 acres.	Same	Same
	-	-	Up to 509 acres would be inventoried for cultural resources, if fencing constructed. Determinations of no effect or no adverse effect, through Section 106 consultation, would be made prior to surface disturbing activities.
VISUAL RESOURCES	Long-term impacts on 1,276 acres from minerals and lands activities.	Same	Same
	-	-	Long-term impacts on 509 acres due to fencing, if constructed.
RECREATION	Positive impacts on 16,640 acres due to bighorn sheep hunting.	Same	Same
WILDERNESS	None	Same	Same
NATURAL AREAS	None	Same	Same
ACECs	None	Same	Same
FIRE MANAGEMENT	None	Same	Same
SOCIO-ECONOMICS	None	Same	Same

CHAPTER 1

INTRODUCTION

CHAPTER 1

INTRODUCTION

PURPOSE AND NEED

The purpose of this resource plan is to consider what level of natural and cultural resource management will be conducted by the Bureau of Land Management (BLM) on 2,209,326 acres of withdrawn public land within the Nellis Air Force Range. This plan will focus on four key management issues: vegetation, wildlife habitat, wild horses, and cultural resources. The need for this plan resulted from the passage of the Military Lands Withdrawal Act of 1986 (Public Law 99-606), which directed the Secretary of the Interior to develop a management plan for natural and cultural resources on the Nellis Air Force Range within 3 years from the date of enactment of the Military Lands Withdrawal Act (see Appendix A). This Draft Resource Plan/Draft Environmental Impact Statement (DRP/DEIS) is being prepared in accordance with the Federal Land Policy and Management Act (FLPMA), the National Environmental Policy Act (NEPA), the BLM's planning regulations, Title 43 Code of Federal Regulations Part 1600 (43 CFR 1600), and the Council on Environmental Quality (CEQ) regulations (40 CFR 1500).

The Nellis Air Force Range was established by President Roosevelt in 1940 as the Las Vegas Bombing and Gunnery Range. The newly-formed military range partially overlapped what is now known as the Desert National Wildlife Range (created by Executive Order 7373 in 1936 for the protection of resident populations of bighorn sheep). This overlap has resulted in the co-use of a portion of the area by the U.S. Fish and Wildlife Service (USFWS) and the U.S. Air Force (USAF). The co-use area is managed by the USFWS pursuant to the National Wildlife Refuge System Administration Act of 1966 and is, therefore, specifically excluded from consideration in this document (see Map 1)(All maps are located at the end of this Chapter).

During the past half century, two additional Executive Orders, nine Public Land Orders, two Memorandums of Understanding (MOU), and two Public Laws (PL) have transferred management responsibilities for limited portions of the Nellis Range to the U.S. Department of Energy (DOE) and enlarged the acreage of the Nellis Air Force Range to its current size of 3,035,326 acres.

The impacts of withdrawing the lands for military uses were analyzed in the Final Environmental Impact Statement for the Proposed Public Land Withdrawal, Nellis Air Force Bombing Range, Nye, Clark, and Lincoln Counties, Nevada (1981) and the Final Environmental Impact Statement for the Groom Mountain Range, Lincoln County, Nevada (1986).

The USAF, USFWS, and the BLM entered into MOUs in 1951 and 1962 to provide for the protection of bighorn sheep and wild horses for the Nellis Air Force Range. These documents have been updated as needed.

Cooperative agreements for the conservation and development of fish and wildlife resources and the protection of wild horses were implemented in 1961, 1963, 1965, 1969, and 1973 (see Appendix C). The Nevada Wild Horse Range, located in the north-central portion of the planning area, is managed for the protection of wild horses and the maintenance of ecologically balanced population levels (see Map 8). In 1977, the USAF, BLM, DOE, USFWS, and Nevada Department of Wildlife (NDOW) signed the Five-Party Cooperative Agreement to provide for the protection, development, and management of natural resources, including fish and wildlife, vegetation, watershed, and wild horses, on the Nellis Air Force Range and the Nevada Test Site (see Appendix B).

Prior to 1987, fire management activities on the Nellis Air Force Range were covered under a Reciprocal Agreement between the BLM and the USAF. After 1987, an MOU was approved to formalize a new Fire Management Reciprocal Agreement which incorporated Congressional direction, as specified in the Military Lands Withdrawal Act (see Appendix E).

On November 6, 1986, the Military Lands Withdrawal Act of 1986 (PL 99-606) withdrew the lands known as the Nellis Air Force Range for military purposes. On June 17, 1988, Public Law 100-338 amended the Military Lands Withdrawal Act (hereinafter referred to as the Act) to include the lands known as the Groom

Mountain Range Addition in the Nellis Air Force Range. The following excerpt from Section 3 (a) of the Act describes how the withdrawn lands are to be managed:

(a) MANAGEMENT BY THE SECRETARY OF THE INTERIOR— (1) During the period of the withdrawal, the Secretary of the Interior shall manage the lands withdrawn under section 1 (except those lands within a unit of the National Wildlife Refuge System) pursuant to the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.) and other applicable law, including the Recreation Use of Wildlife Areas Act of 1962 (16 U.S.C. 668dd et seq.), and this Act. Lands within the Desert National Wildlife Range and the Cabeza Prieta National Wildlife Refuge shall be managed pursuant to the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd et seq.) and other applicable law. No provision of this Act, except sections 4, 11, and 12, shall apply to the management of the Desert National Wildlife Range or the Cabeza Prieta National Wildlife Refuge.

(2) To the extent consistent with applicable law and Executive orders, the lands withdrawn under section 1 may be managed in a manner permitting— (A) the continuation of grazing pursuant to applicable law and Executive orders where permitted on the date of enactment of this Act; (B) protection of wildlife and wildlife habitat; (C) control of predatory and other animals; (D) recreation; and (E) the prevention and appropriate suppression of brush and range fires resulting from nonmilitary activities.

(3) (A) All nonmilitary use of such lands, other than the uses described in paragraph (2), shall be subject to such conditions and restrictions as may be necessary to permit the military use of such lands for the purposes specified in or authorized pursuant to this Act. (B) The Secretary of the Interior may issue any lease, easement, right-of- way, or other authorization with respect to the nonmilitary use of such land only with the concurrence of the Secretary of the military department concerned.

Section 3(b) requires the Secretary of the appropriate military department to determine which lands require closure to public use due to military operations, public safety or national security. Prior to the initiation of formal planning, the Air Force was consulted to discuss closure to public uses and limitations on the management of natural and cultural resources. Verbal determinations on these issues were made and are reflected in the planning criteria, discussed later in this chapter.

Section 12(a) requires the Secretary of the Interior, with the concurrence of the Secretary of the appropriate military department, to determine which of the withdrawn lands may be considered for opening to the operation of the Mining Law of 1872, the Mineral Lands Leasing Act of 1920, as amended, the Mineral Leasing Act for Acquired Lands of 1947, the Geothermal Steam Act of 1970, or any one or more of such Acts. The Air Force has been consulted concerning which lands could be considered for opening to operation of the above acts. Written documentation of their determination has not been obtained by the BLM, but verbal determinations were made and these are reflected in the planning criteria discussed later in this chapter.

LOCATION AND LAND STATUS

The Nellis Air Force Range is located in south-central Nevada in Clark, Lincoln and Nye counties (see Map 2). The withdrawn area encompasses 3,035,326 acres, of which 826,000 acres are administered by the U.S. Fish and Wildlife Service as the Desert National Wildlife Range. Included within the Nellis Range are approximately 123 acres of private lands (patented mining claims)(see Map 4).

The Planning Area addressed in this document contains 2,209,326 acres of public land located within the boundaries of the Nellis Air Force Range (see Map 2).

PLANNING PROCESS OVERVIEW

The planning process is designed to enable BLM to address the issues and concerns of the public, while complying with the laws and policies established by Congress and the Executive Branch of the Federal Government. The Nellis Air Force Range DRP/DEIS process involves nine basic steps and emphasizes the role of public participation at several key stages. The nine planning steps are as follows:

Step 1: Identification of Issues

Issues drive the resource management planning process and indicate specific concerns which the BLM or the public may have regarding the planning area. An issue is defined as an opportunity, conflict, or problem pertaining to the management of public lands

and associated resources. Identification of the issues orients the planning process so that the efforts of interdisciplinary analysis and documentation are directed toward resolution of the issues.

Issue identification for the Nellis Air Force Range DRP/DEIS was initiated by BLM managers and specialists, in consultation with the participating agencies of the Five-Party Cooperative Agreement. A Notice of Intent was published in the Federal Register, inviting the public and other federal and state agencies to participate in the planning process. Scoping meetings were held in Alamo, Tonopah, and Las Vegas, Nevada to receive public input. The following are the issues identified for consideration in this Draft Resource Plan:

Issue 1. Vegetation

What vegetation condition(s) is(are) desirable? What management actions are needed to obtain or maintain that condition? What special management actions are needed to protect threatened and endangered plant species?

Issue 2. Wildlife Habitat

What are the wildlife habitat objectives for existing wildlife species? What areas require habitat management plans? What special management actions are needed to protect threatened and endangered animal species?

Issue 3. Wild Horse and Burro Management

Are the current objectives of the Nevada Wild Horse Range Herd Management Area Plan adequate?

Issue 4. Cultural Resources

What special management actions are needed for the protection of archaeological and historical sites?

The following uses were considered as potential issues but were not selected for detailed analysis due to the constraints imposed by the withdrawal legislation and military use of the area: prevention and suppression of brush and range fires, livestock grazing, minerals, management of the Desert National Wildlife Range, control of predatory and other animals, public access, recreation, rights-of-way, and utility corridors. For a detailed discussion of these topics, see the Nellis Air Force Range Resource Plan Pre-Planning Contract, available in Caliente Resource Area or the Las Vegas District offices of the BLM.

Step 2: Development of Planning Criteria

After the issues were identified, planning criteria were formulated to guide the development of the resource plan. The criteria were derived from laws, Executive Orders, regulations, planning principles, BLM National and State office guidance, consultation with the Air Force, public involvement, and resource information. The criteria helped to set the standards for data collection, to establish alternatives to be examined, and to select the preferred alternative and final plan. Planning criteria ensure that the plan is tailored to the issues and that unneeded data collection and analysis are avoided. The planning criteria for this resource plan are as follows:

A. Recognize that the lands on the Nellis Air Force Range are reserved for use by the Secretary of the Air Force: 1. as an armament and high-hazard testing area; 2. for training for aerial gunnery, rocketry, electronic warfare, and tactical maneuvering and air support; and 3. subject to other defense-related purposes consistent with the purposes specified in the Act.

B. The Nellis Air Force Range Resource Plan will not address access per se, but will address the extent to which access restrictions and limitations have a bearing on the resource management issues identified for analysis in this resource plan.

C. An MOU between the Secretary of the Interior and Secretary of the Air Force will be prepared to implement the resource plan. This MOU will stipulate that the Director of the BLM is to provide assistance in the suppression of fires resulting from the military use of lands withdrawn, if requested by the Secretary of the military department concerned.

D. Lands within the Desert National Wildlife Range will be managed in accordance with the National Wildlife Refuge System Administration Act of 1966, and other applicable law and will not be changed or modified by this resource plan.

E. Relegate site-specific resource management direction to the existing activity plan (e.g. Nevada Wild Horse Range Herd Management Area Plan and Environmental Assessment).

F. Apply the principles set forth in the Military Lands Withdrawal Act of November 6, 1986 (PL 99-606).

G. Use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, social, and environmental aspects of public land management.

H. Rely on available inventories of the lands withdrawn by PL 99-606 (identified as the Nellis Air Force Range), their resources, and other values to reach sound management decisions.

I. Give consideration to present and potential uses of the lands withdrawn by PL 99-606, as defined in the Act.

J. Consider impacts of uses on adjacent or nearby non-Federal lands and on non-public land surface over federally-owned minerals.

K. Weigh long-term benefits and detriments against short-term benefits and detriments.

L. Comply fully with applicable pollution control laws, including Federal and State air, water, noise, or other pollution standards or implementation plans, consistent with the stated purpose of the Nellis Range withdrawal.

M. Coordinate BLM resource inventory, planning, and management activities with the resource planning and management programs of other Federal departments and agencies, State and local governments, and Indian tribes to the extent consistent with the laws governing the administration of the lands withdrawn by PL 99-606, as defined in the Act.

Step 3: Inventory and Data Collection

Using the planning criteria (item H), as described in Step 2 above, and given the access restrictions and time constraints, it was determined that existing inventories, while limited, were adequate for the purposes of this plan.

Step 4: Analysis of the Management Situation

The Management Situation Analysis (MSA) is a deliberate assessment of the current situation. It includes a description of current BLM management guidance, a discussion of existing problems and opportunities for solving them, and a consolidation of existing data that is needed to analyze and resolve the identified issues. Generally speaking, the MSA is incorporated into the Resource Plan as the Affected Environment, Continuing Management Guidance and Alternatives. The MSA for the Nellis Resource Plan is available for review at the Caliente Resource Area and the Las Vegas District offices of the BLM.

Step 5: Formulation of Alternatives

On the basis of the issues, planning criteria, and concerns raised during scoping, two comprehensive alternatives were developed for management's consideration. The No Action alternative is required by law and represents a continuation of present activities. The other alternative strives to resolve the issues, while emphasizing a different level of management intensity. Other alternatives were initially considered but were eliminated from detailed analyses. These other alternatives are listed in Chapter 2, with a discussion of why they were not considered further.

Step 6: Estimation of Effects of Alternatives

In accordance with NEPA, the physical, biological, social, and economic effects of implementing each of the alternatives are estimated to allow for a comparative evaluation of impacts (see Chapter 4). A general analysis of the issues and concerns for the planning area was completed; site-specific environmental assessments (EAs) will be prepared for specific projects and proposals on a project-specific basis.

Step 7: Selection of the Preferred Alternative

Analysis of the issues, the resources affected, and the management restrictions imposed by the military uses of the withdrawn lands resulted in the selection of Alternative B as the Preferred Alternative. This alternative is designed to protect natural resources and to improve resource conditions, within the constraints imposed by the military use of the withdrawn lands.

Based on (a) the issues and concerns identified through the planning process; (b) information obtained from public meetings and letters; (c) formal coordination and consultation with other agencies; (d) decision criteria developed and considered by management; and (e) impact analyses of the alternatives, the Caliente Area Manager and the Las Vegas District Manager recommended a Preferred Alternative to the Nevada State Director, who reviewed and approved the selection. The Commander, Tactical Fighter Weapons Center, Nellis Air Force

Base, also reviewed the analysis and concurred with this selection. After the selection and approval of the Preferred Alternative, the DRP/DEIS is distributed to the public, including other government agencies and interest groups, for a 90 day review and comment period.

Step 8: Selection of the Proposed Plan

Following completion of the public review and comment period, the Las Vegas District Manager will recommend a proposed plan to the BLM State Director for approval. Based on an evaluation of public comments, the BLM and USAF may retain the preferred alternative as the proposed plan, reassess and modify the preferred alternative to meet management needs, or select a different alternative from the range of alternatives identified in the draft plan. After reviewing the recommended proposed plan, the BLM Nevada State Director will file the Proposed Resource Plan and Final EIS (PRP/FEIS) with Environmental Protection Agency (EPA) and distribute the document to the public.

The Governor of the State of Nevada will be given a 60-day consistency review, allowing the State to determine whether the PRP/FEIS is consistent with State and local Government plans and policies. This review of the PRP/FEIS will begin when the Governor receives copies of the document.

A 30-day protest and appeal period begins when the PRP/FEIS is filed with EPA. If no protests are received during this time, the BLM State Director, after conferring with the Commander, Tactical Fighter Weapons Center, Nellis Air Force Base, will approve the plan and publish a Record of Decision (ROD). If protests are received, the BLM Director will resolve those protests before the plan is approved and the ROD published.

Implementation of the resource plan will then take place. Section 3(e) of the Act directs BLM and the Air Force to enter into an MOU to implement the resource plan. This MOU will establish the policies, procedures, and responsibilities for coordination and cooperation between the BLM and the Air Force.

Prior to the initiation of specific resource projects and proposals, site- specific EAs will analyze the potential environmental impacts associated with the proposed activities. Mitigation measures will be developed and incorporated as special stipulations into authorization permits.

Step 9: Monitoring and Evaluation

The implementing MOU will include intervals and standards for monitoring and evaluation as established in this resource plan. The intervals will not exceed 5 years. Monitoring and evaluation will be used (a) to determine the effectiveness of the resource plan in resolving the issues; (b) to ensure that mitigation measures are satisfactory; (c) to verify that the assumptions used in the assessment of impacts are correct; (d) to ascertain whether there have been changes in related plans of other Federal, State or local Governments; and (e) to determine whether or not implementation of the resource plan is achieving the desired results. Any information gained will be incorporated into future planning, including any amendments or revisions to the resource Plan.

At least every five years, BLM will determine, with the concurrence of the Air Force, which public lands are suitable for opening to the mining and mineral leasing laws, as per Section 12 of the Act. If further decontamination of the lands is required (as per Section 7 of the Act) to allow expanded nonmilitary uses, an amendment that addresses possible management changes to this plan will be completed.

CONFORMANCE STATEMENT

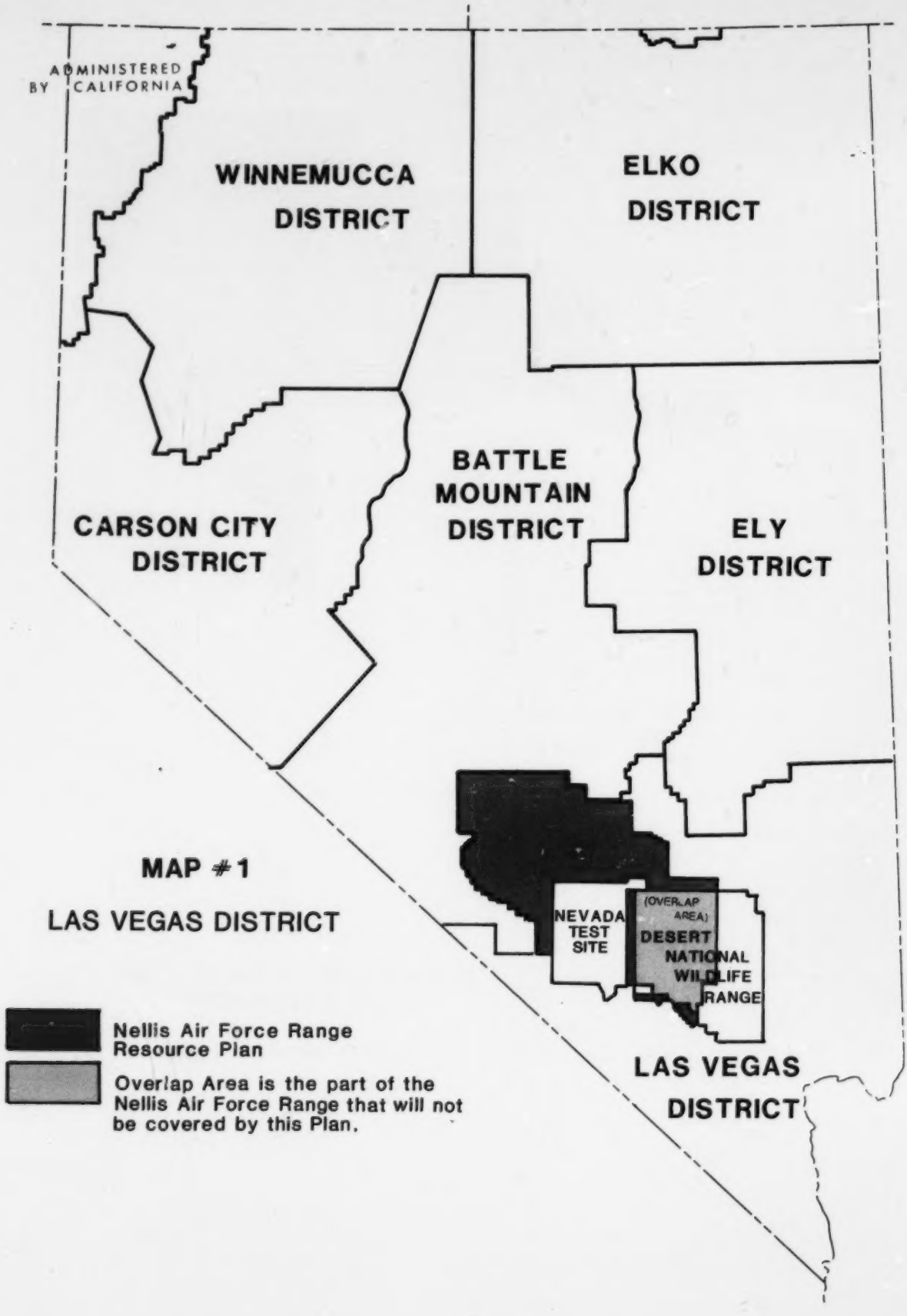
Prior to being incorporated by legislative action into the Nellis Air Force Range, the Groom Mountain Range addition (89,600 acres) was managed in accordance with the Caliente Management Framework Plan (MFP). The Caliente MFP was maintained in 1988 to adjust its boundaries to exclude the Groom Mountain Range withdrawal area. Only those decisions pertaining to livestock grazing and visual resource management for the Groom Mountain portion will be carried forward in this resource plan.

CONSISTENCY WITH OTHER PLANS

There are no known inconsistencies between any of the alternatives and the officially approved and adopted resource-related policies and programs of other Federal agencies, State, and local Governments. Existing BLM land use plans that cover lands contiguous to the planning area include the Clark County Management Framework Plan (MFP), Caliente MFP, Tonopah MFP, and the Esmeralda-Southern Nye Resource Management Plan (RMP).

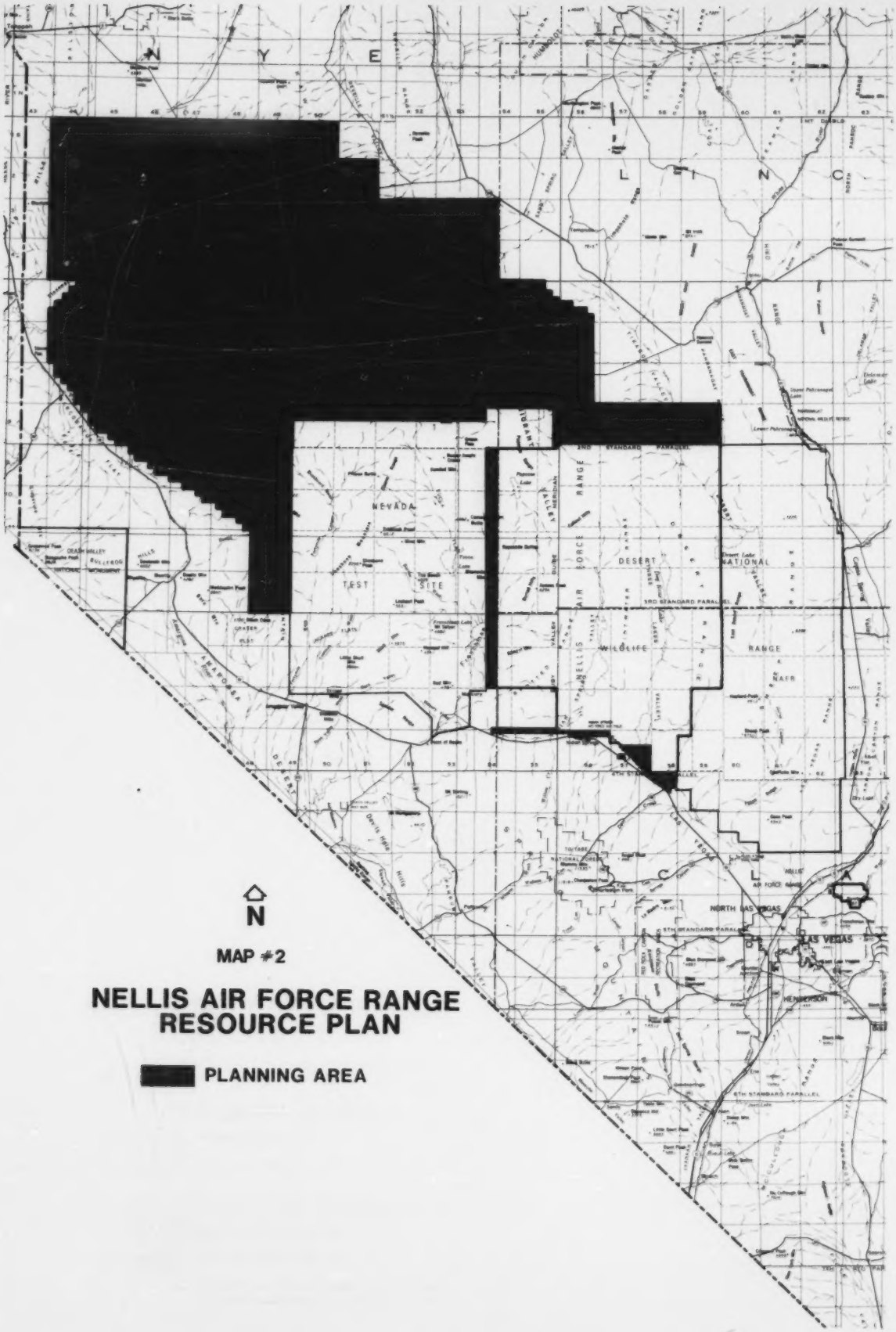
The Desert National Wildlife Range Refuge Management Plan addresses resource management on lands administered by the USFWS. These lands are located both within and adjacent to the planning area. The USFWS administered lands within the Nellis Range (co-use area) will continue to be managed pursuant to the National Wildlife Refuge System Administration Act of 1966.

Continuing coordination and consultation will take place during the public comment period on the Draft Resource Plan, the Proposed Resource Plan, the approved resource plan, and ROD. As previously noted, the Governor of Nevada will have 60 days to review the Proposed Plan to determine consistency with State plans.


ADMINISTERED BY CALIFORNIA
WINNEMUCCA DISTRICT
ELKO DISTRICT
BATTLE MOUNTAIN DISTRICT
CARSON CITY DISTRICT
ELY DISTRICT
NEVADA TEST SITE
(OVERLAP AREA)
DESERT NATIONAL WILDLIFE RANGE
LAS VEGAS DISTRICT
Nellis Air Force Range Resource Plan
Overlap Area is the part of the Nellis Air Force Range that will not be covered by this Plan.

MAP #1

LAS VEGAS DISTRICT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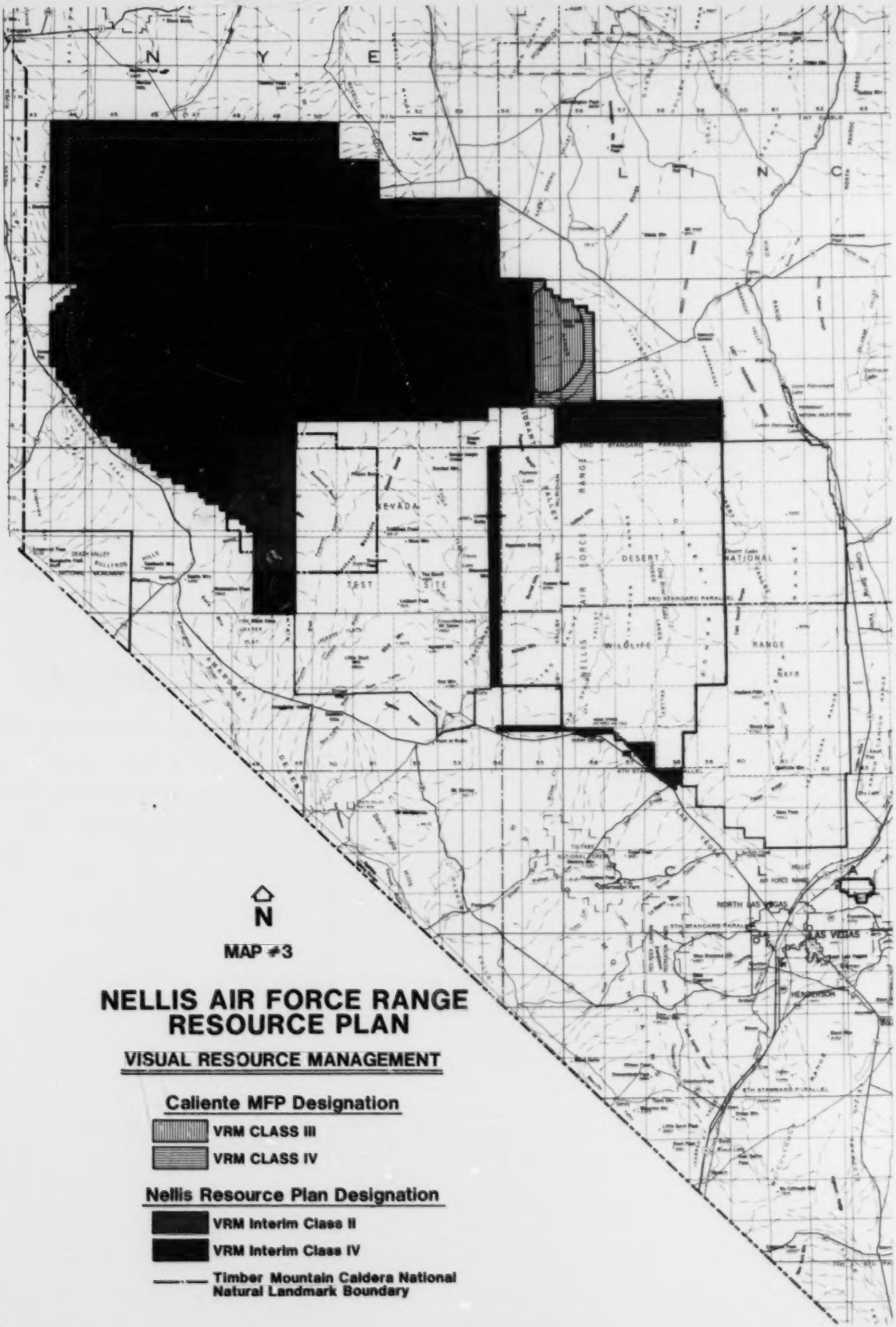
MAP #2
NELLIS AIR FORCE RANGE
RESOURCE PLAN
PLANNING AREA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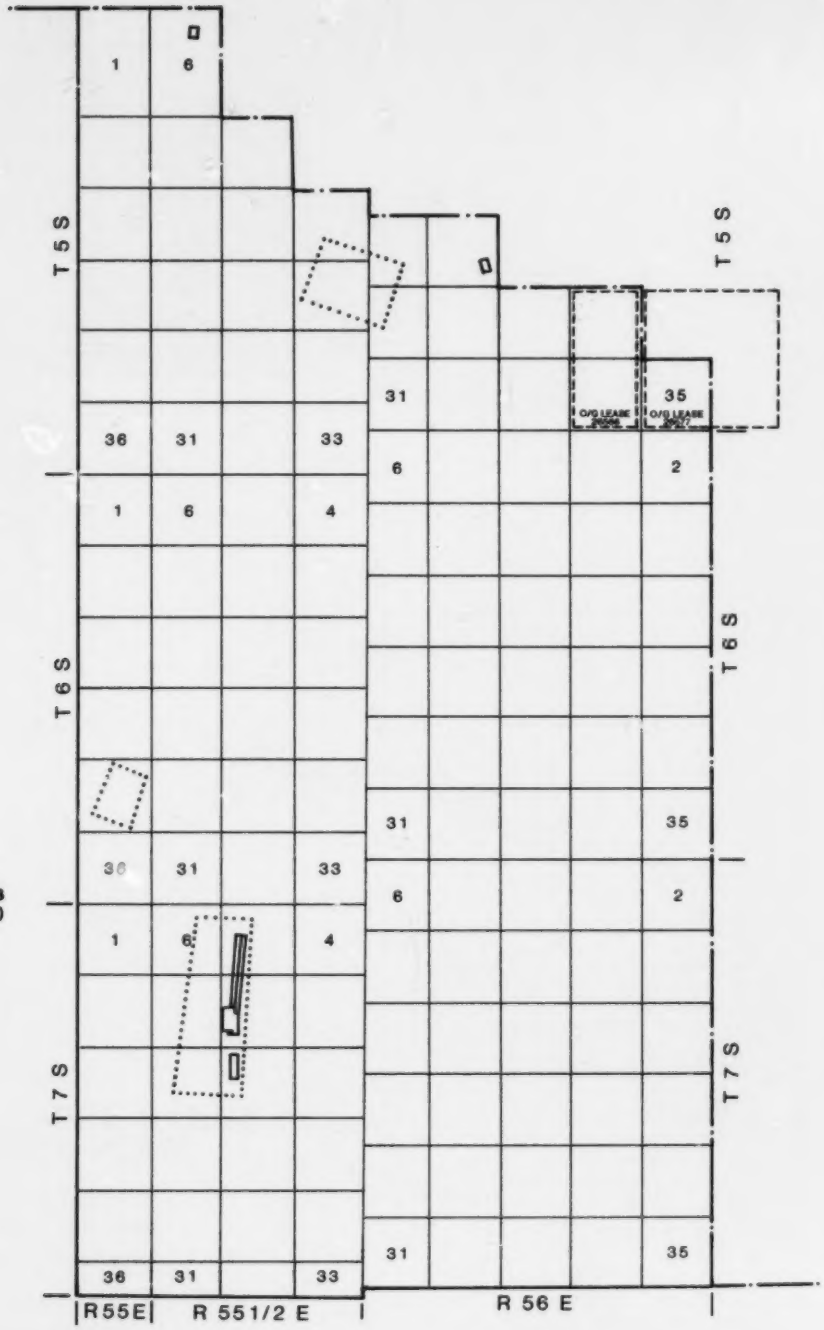
MAP #3
NELLIS AIR FORCE RANGE
RESOURCE PLAN
VISUAL RESOURCE MANAGEMENT
Caliente MFP Designation
VRM CLASS III
VRM CLASS IV
Nellis Resource Plan Designation
VRM Interim Class II
VRM Interim Class IV
Timber Mountain Caldera National
Natural Landmark Boundary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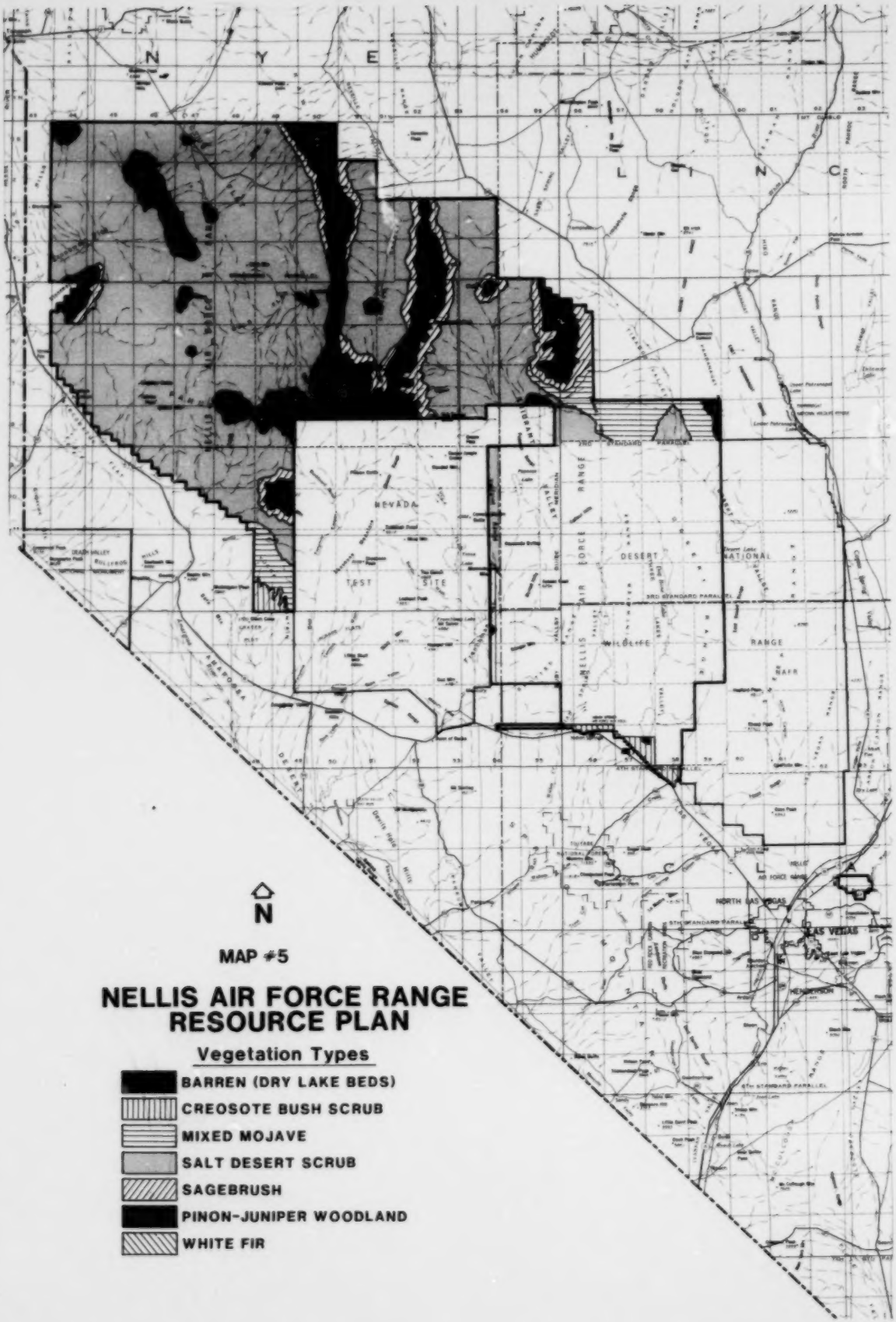
MAP #4
MINERALS
Withdrawal Boundary
O/G Leases
Patented Mining Claims
Unpatented Mining Claims
(APPROX. LOCATION)
T 5 S
T 6 S
T 7 S
R55E
R 551/2 E
R 56 E
1
6
31
35
36
31
33
6
2
1
6
4
O/G LEASE
O/G LEASE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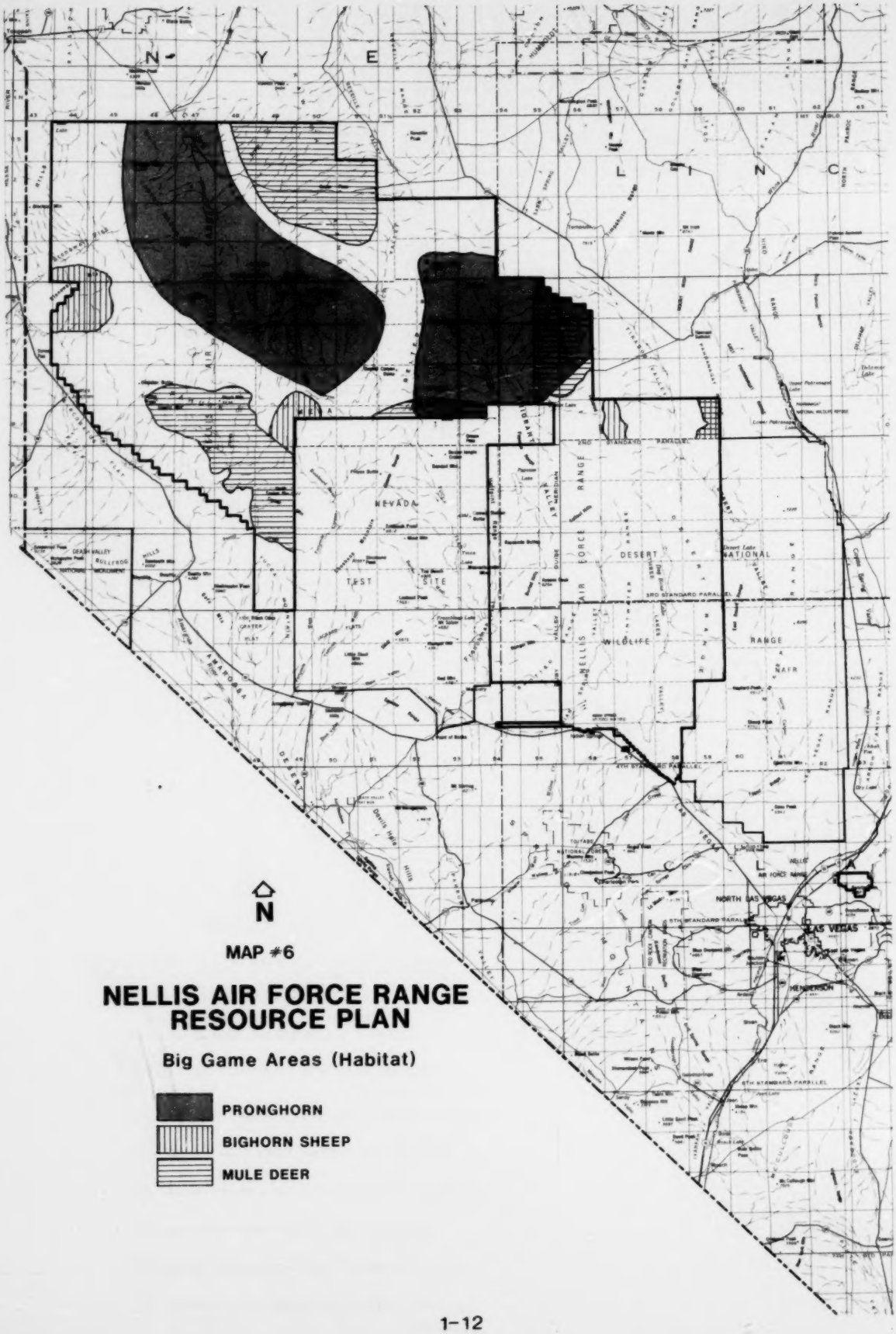
MAP #5
NELLIS AIR FORCE RANGE
RESOURCE PLAN
Vegetation Types
BARREN (DRY LAKE BEDS)
CREOSOTE BUSH SCRUB
MIXED MOJAVE
SALT DESERT SCRUB
SAGEBRUSH
PINON-JUNIPER WOODLAND
WHITE FIR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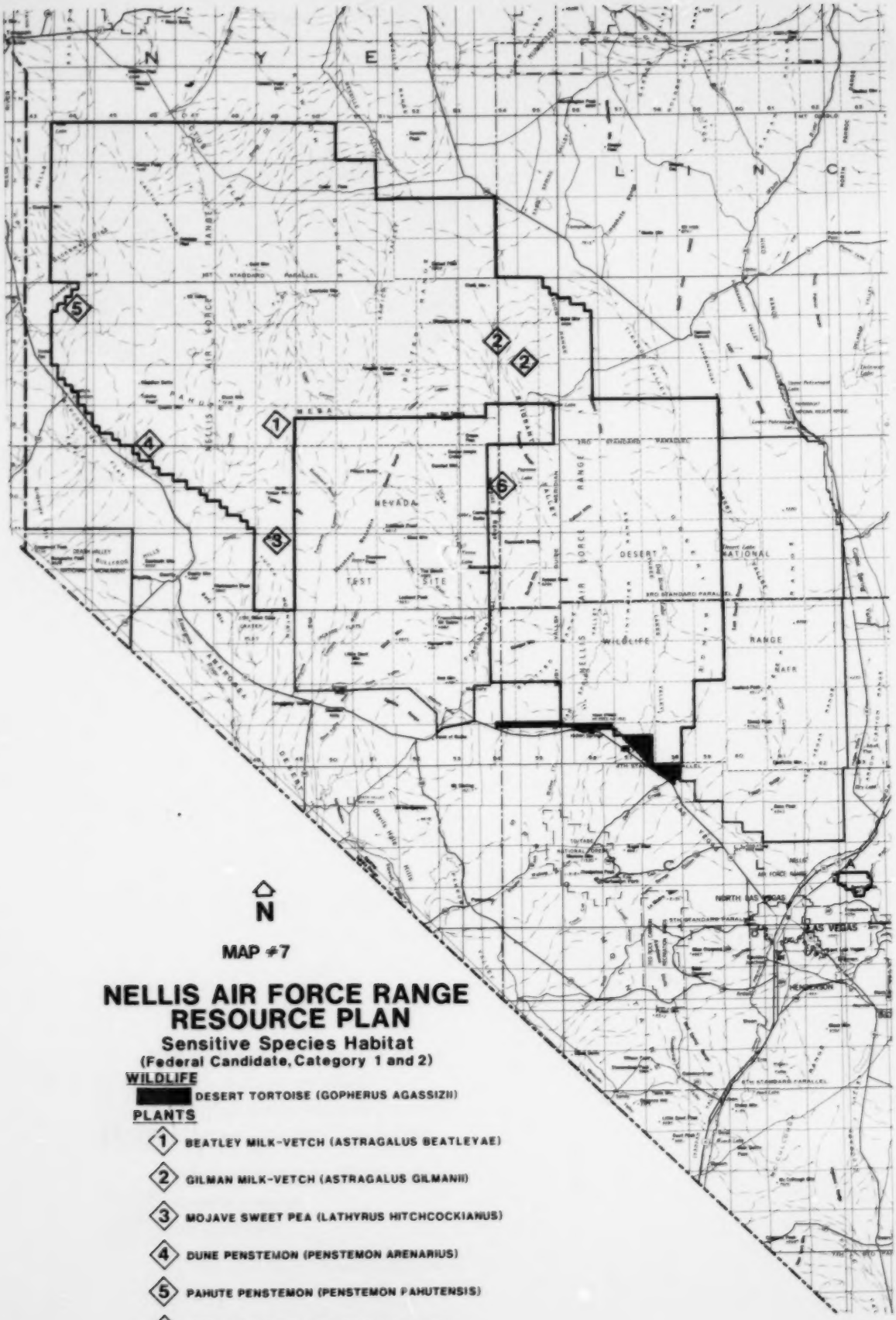
MAP #6
NELLIS AIR FORCE RANGE
RESOURCE PLAN
Big Game Areas (Habitat)
PRONGHORN
BIGHORN SHEEP
MULE DEER



NELLIS AIR FORCE RANGE RESOURCE PLAN

Sensitive Species Habitat

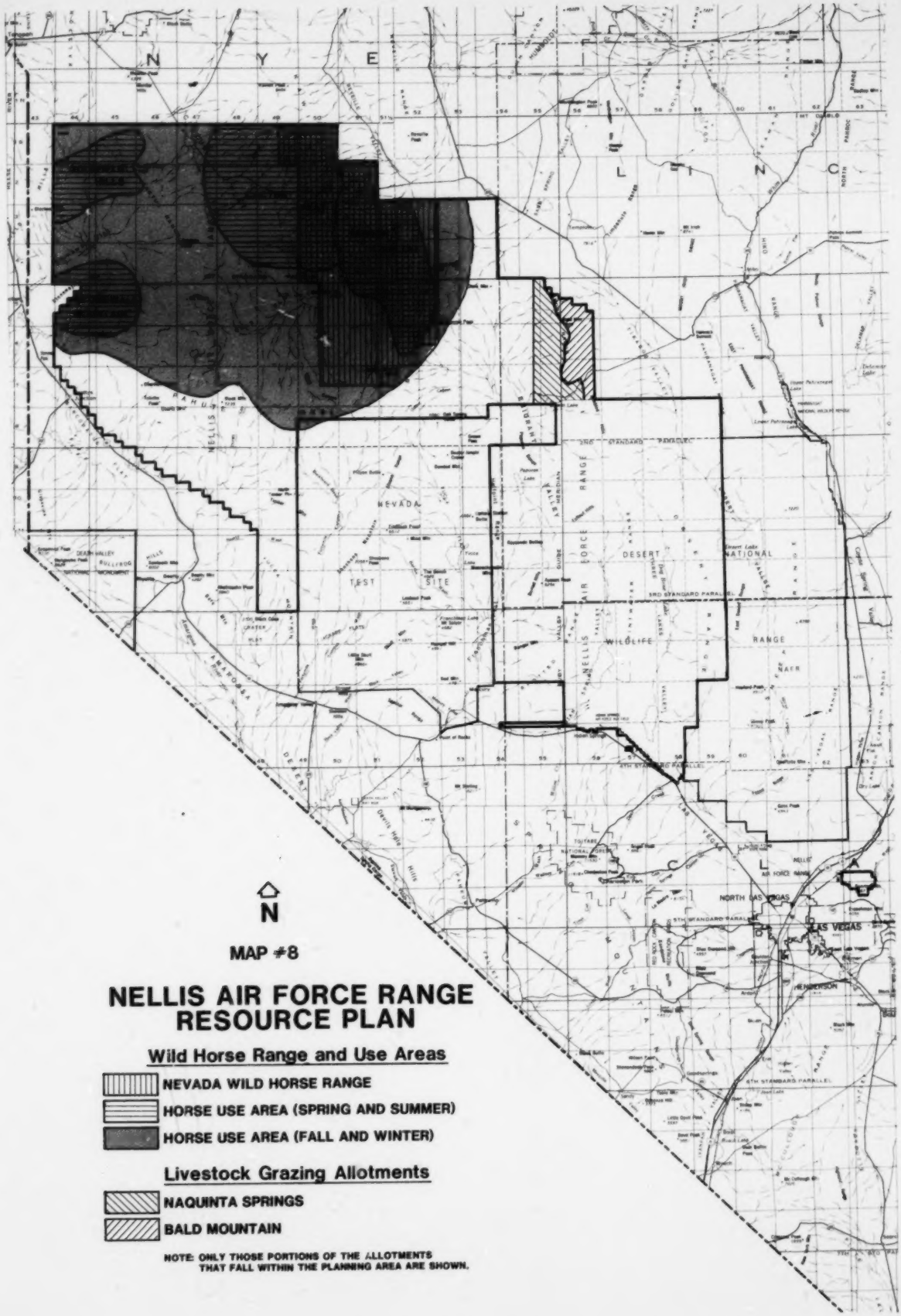
(Federal Candidate, Category 1 and 2)

WILDLIFE

DESERT TORTOISE (GOPHERUS AGASSIZII)

PLANTS

1. BEATLEY MILK-VETCH (ASTRAGALUS BEATLEYAE)
2. GILMAN MILK-VETCH (ASTRAGALUS GILMANII)
3. MOJAVE SWEET PEA (LATHYRUS HITCHCOCKIANUS)
4. DUNE PENSTEMON (PENSTEMON ARENARIUS)
5. PAHUTE PENSTEMON (PENSTEMON PAHUTENSIS)
6. BEATLEY PHACELIA (PHACELIA BEATLEYAE)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MAP #8
NELLIS AIR FORCE RANGE
RESOURCE PLAN
Wild Horse Range and Use Areas
NEVADA WILD HORSE RANGE
HORSE USE AREA (SPRING AND SUMMER)
HORSE USE AREA (FALL AND WINTER)
Livestock Grazing Allotments
NAQUINTA SPRINGS
BALD MOUNTAIN
NOTE: ONLY THOSE PORTIONS OF THE ALLOTMENTS
THAT FALL WITHIN THE PLANNING AREA ARE SHOWN.

CHAPTER 2

ALTERNATIVES

CHAPTER 2

ALTERNATIVES

INTRODUCTION

This chapter presents the Preferred Alternative and other alternatives that were considered in the development of this plan. Formulation of the alternatives was guided by the planning criteria, public consultation through the scoping process, coordination with other agencies, and evaluation by BLM. The alternatives represent reasonable choices of options among multiple-use management programs.

A detailed description of each alternative, management guidance common to all alternatives, and a discussion of other alternatives that were considered but eliminated from further analysis are contained within this chapter. Table S-1, located in the Summary at the beginning of this document, summarizes the specific components of each alternative. Table S-2 summarizes and compares the potential impacts of each alternative on the affected resources. Chapter 4 more fully describes those potential impacts.

Each alternative addresses three of the four issues in detail. Resources or programs which were not identified as issues are also examined if changes in management objectives, direction, and action are proposed.

Management of cultural resources was originally considered as an issue on the Nellis Air Force Range. During the development of the plan, however, it became apparent that the options available for the management of cultural resources are limited by the military uses of the withdrawn lands; the opportunities to manage for public values are non-existent, while the opportunities to manage for information potential and conservation are already regulated by existing laws and regulations. Management of cultural resources, therefore, will be addressed only in the Management Guidance Common To All Alternatives section of this chapter.

ALTERNATIVES CONSIDERED IN THE PLAN

ALTERNATIVE A-NO ACTION: This alternative represents a continuation of current management direction within the framework of present laws and regulations, including existing Memoranda of Understanding and Cooperative Agreements. BLM will not propose or authorize any new types of uses or changes in levels of use. The No Action Alternative provides a baseline for the comparison of the environmental effects of the other alternatives.

ALTERNATIVE B-PREFERRED ALTERNATIVE: This alternative would direct management attention toward improving rangeland vegetative conditions and wildlife habitat by achieving and maintaining the appropriate management level for the wild horse population on the planning area. BLM will not propose or authorize any new uses unless they contribute to improved conditions; existing use levels will be adjusted to provide for improved conditions.

MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES

This section describes resource management guidance that is applicable to and, therefore, common to all alternatives. Continuing management guidance includes laws, Executive Orders, regulations, Memoranda of Understanding, Cooperative Agreements, Department of the Interior manuals, BLM manuals, BLM Instruction Memoranda, and other management prescriptions and practices which will not change or be proposed for change within this plan.

LANDS PROGRAM

Rights-of-way

BLM will continue to recognize valid existing rights in the planning area. Existing rights-of-way (ROWs) consist of two highway rights-of-way, one minerals material site, three power transmission lines, and one telephone and telegraph line, all located near the Indian Springs Auxiliary Air Field.

Lands within the planning area will continue to be available for right-of-way use. BLM will, however, issue ROWs for nonmilitary uses only with the concurrence of the Secretary of the Air Force. These ROW applications will be analyzed on a case-by-case, site-specific basis; natural and cultural values will be protected through avoidance or mitigation.

Utility corridors will not be designated within the planning area. The Air Force has indicated that utility corridors are not compatible with the identified military uses of the Nellis Air Force Range.

Disposals

No lands in the planning area will be made available for disposal as these lands do not meet FLPMA Section 203 sales or other disposal criteria. The Secretary of the Air Force has indicated that any disposals on the Nellis Range would conflict with military uses of the withdrawn land.

Land Use Authorizations

Lands within the planning area will continue to be available, on a limited basis, for some land use authorizations. Nonmilitary land use authorizations, such as leases and permits, will be issued only with the concurrence of the Secretary of the Air Force. Any land use authorizations will be analyzed on a case-by-case, site-specific basis; natural and cultural values will be protected through avoidance or mitigation.

ACCESS

The Nellis Air Force Range will remain closed to the general public; the Secretary of the Air Force is authorized by the Act to close the Nellis Range for security or safety reasons. Access to the planning area is permitted by the Air Force for specific purposes and is subject to security clearance, scheduling, and safety constraints.

MINERALS

Pursuant to PL 99-606, the Nellis Air Force Range is withdrawn from all forms of appropriation under the mining laws and the mineral leasing and the geothermal leasing laws. The Air Force has concluded that no lands within the Nellis Range are suitable for opening to mineral exploration and development. Such use would 1) interfere with the primary use of these lands for military purposes, 2) present unacceptable health, safety, and welfare concerns for the public, and 3) not conform with national security needs. The military uses of the Nellis Air Force Range include: conducting weapons systems testing, training for electronic warfare, tactical maneuvering, and air support, including air-to- ground and targeting activities and nuclear testing. Many national defense programs are carried out on or over the Nellis Range which preclude public use of the surface and subsurface resources; the opening of the area to mineral exploration and development at this time would seriously compromise these programs. With the exception of claims in the Groom Mountain Range addition, the Air Force has compensated owners of valid patented or unpatented mining claims on the Nellis Range by securing leases for valid claims or by purchasing such claims outright at fair market value.

In November, 1991 and every 5 years thereafter, BLM will, with Air Force concurrence, determine which, if any, of the withdrawn public lands can be considered for opening under the operation of the Mining Law of 1872, the Mineral Lands Leasing Act of 1920, as amended, the Mineral Leasing Act for Acquired Lands of 1947, the Geothermal Steam Act of 1970, or any one or more of such Acts.

Valid existing rights will continue to be recognized. At the time of the withdrawal, 25 unpatented mining claims and all or portions of two oil and gas leases were located within the Nellis Air Force Range. If any of the valid existing rights are eliminated by relinquishment, expiration or purchase by the Air Force, the rights will revert to the United States. As authorized by the Act, the lands will remain closed to subsequent entry.

SOIL, WATER, and AIR RESOURCES

Soil, water, and air resources will continue to be evaluated on a case-by-case basis as a part of project level planning. Such evaluation will consider the significance of the proposed project and the sensitivity of soil, water, and air resources in the affected area. Stipulations will be attached, as appropriate, to ensure compliance with the mandates of soil, water, and air resource management and protection.

Soils

Soils will be managed to maintain or improve rangeland productivity and to minimize present and potential wind and water erosion. No comprehensive soil surveys have been conducted on the Nellis Range; therefore, all soils data will be gathered on a case-by-case basis, in response to site-specific actions, or will be inferred from similar sites that have been surveyed. Soils data will be used in planning, support, and implementation of resource activities.

Water Resources

Water quality will be maintained or improved in accordance with Federal and State standards. Consultations will be undertaken with state agencies

for proposed projects that may significantly affect water quality. BLM will apply for appropriative water rights with the State of Nevada for use in the wild horse, wildlife, and livestock programs.

Air

All BLM and BLM authorized activities will be managed to prevent air quality deterioration beyond the thresholds established by the Nevada Ambient Air Quality Standards.

VEGETATION

Vegetation management objectives specific to the Nevada Wild Horse Range and the Bald Mountain grazing allotment are described under the Wild Horse and Livestock Grazing sections of this Chapter.

All BLM actions will be evaluated for potential impacts to Federal and State threatened and endangered species. Consultations with the Nevada Department of Forestry or the USFWS will be undertaken as required by applicable law. Protection of Federal Category 1 and 2 species (see Glossary for definitions of these categories) will be considered in all BLM authorized or initiated activities.

FORESTRY

The planning area will not be available for the management of forest products. Safety and security constraints imposed by the military use of the Nellis Air Force Range preclude access for timber management activities.

WILDLIFE HABITAT

All BLM actions will be evaluated for potential impacts to Federal and State threatened and endangered species. Consultations with the Nevada Department of Wildlife or the USFWS will be undertaken as required by applicable law. Protection of Federal Category 1 and 2 species will be considered in all BLM authorized or initiated activities.

Predator control will be authorized, as required, through the District Animal Damage Control Plan (ADC), in coordination with the Nevada Department of Wildlife and the Animal and Plant Health Inspection Service of the U.S. Department of Agriculture.

Wildlife habitat management in the planning area will be conducted in accordance with the principles of the Five-Party Cooperative Agreement (see Appendix B). It is anticipated that the existing agreement will be revised as a result of this resource plan.

WILD HORSES

BLM will manage wild horses on the Nellis Air Force Range in accordance with the principles of the Five-Party Cooperative Agreement (see Appendix B). It is anticipated that the existing agreement will be revised to incorporate the objectives, direction, and actions resulting from this resource plan.

LIVESTOCK GRAZING

The Nellis Air Force Range will continue to be closed to livestock grazing except in those areas where it was authorized at the time of the withdrawal. Management of grazing will be in accordance with the Record of Decision for the Caliente Grazing Environmental Impact Statement (EIS), and the Caliente Management Framework Plan (MFP). The Caliente Rangeland Program Summary (RPS) defines management guidelines for the implementation of these decisions, which considered the recommendations for individual allotments provided by a Coordinated Resource Management Planning (CRMP) team.

Two grazing allotments are affected by the withdrawal: the Naquinta Springs allotment (52,425 acres) is entirely within the planning area and 37,175 acres of the Bald Mountain allotment (269,723 total acres) are contained within the Nellis Air Force Range (see Map 8).

The Caliente EIS identified 1,058 AUMs as being available for livestock on the Naquinta Springs allotment. The Caliente MFP, however, did not allocate any forage for livestock on this allotment. The CRMP recommendation concurred with the MFP; at the time of the withdrawal, the Naquinta Springs allotment, was inactive and no preference was attached to the allotment. In accordance with the withdrawal legislation, the Naquinta Springs allotment will be closed to all livestock grazing.

The Bald Mountain allotment is categorized as a maintenance allotment, where present range condition is considered satisfactory, with moderate to high resource production potential and production near that potential. Other criteria for this category state that there are no serious resource conflicts or controversy, that opportunities for positive economic return from public investment may exist, and that

present management appears satisfactory. The maintenance category assigns a medium priority for Allotment Management Plan (AMP) development.

The Callente RPS identifies 5,811 AUMs of forage available for cattle on the Bald Mountain allotment; approximately 800 AUMs are on the Nellis Range portion of the allotment. The identified season of use is from June 1 to March 31. Livestock management objectives are to maintain forage production at current levels and to continue a static or upward trend in ecological condition. Identified range improvements needed to achieve proper management for the entire allotment include one well, 8 miles of pipeline, two spring developments, four corrals, and 800 acres of vegetative manipulation by controlled burning.

Monitoring of grazing use and its impacts is conducted on a periodic basis and includes data collection on the utilization of key forage species, actual livestock use, precipitation, and ecological status and condition. This monitoring data will undergo periodic analysis and interpretation to determine the effectiveness of management actions and to assess changes in resource conditions. Further actions to mitigate impacts will be recommended as needed.

CULTURAL RESOURCES

Cultural resources will be managed to conserve and protect the full array of archeological, historical, paleontological, natural history, and socio-cultural resources present in the planning area. Access restrictions on the Nellis Air Force Range restrict management of these resources for their information potential or public values.

Federal laws such as the National Historic Preservation Act of 1966 (NHPA) as amended, the Archeological and Historic Preservation Act of 1974, the Archeological Resources Act of 1979 (ARPA), the American Indian Religious Freedom Act of 1978 (AIRFA), FLPMA (1976), and Executive Order 11593 (1971) provide for the protection and management of cultural resources. These laws are implemented through Federal regulations, which provide guidance for the operational procedures of the Cultural Resource Program in meeting the requirements of the law.

The BLM undertakes and maintains a cultural resource inventory for all BLM administered land. These inventories are categorized into three classes: Class I, existing inventory and literature search; Class II, sampling field inventory with all sample units inventoried at Class III standards; and Class III, intensive field inventory. Except under certain specific conditions, set forth in the BLM Cultural Resource Manual and under a programmatic Memorandum of Agreement (NSO-196) between the BLM and the State Historic Preservation Office (SHPO), Class III inventory is required prior to any BLM authorized or initiated surface disturbing activity.

Cultural resources identified as a result of inventory are evaluated under the criteria of eligibility of the National Register of Historic Places (36 CFR 60.4). Sites determined to meet these eligibility criteria are nominated for inclusion on the National Register; special measures are developed and implemented to protect to these resources. Potential project-related impacts to significant sites are mitigated through avoidance or the Section 106 consultation process between the BLM, the SHPO and the Advisory Council on Historic Preservation (ACHP).

Paleontological resources are protected under FLPMA and managed through the issuance of research and scientific use permits.

VISUAL RESOURCES

Visual resources in the Groom Mountain Range addition will continue to be managed in accordance with visual resource management (VRM) Class III and IV guidelines, as identified in the Caliente MFP (See Map 3). Visual resource management specific to each alternative is discussed under that alternative.

RECREATION

Access restrictions on the Nellis Air Force Range preclude all unrestricted recreational opportunities in the planning area. Should negotiations currently underway between the Air Force and the Nevada Department of Wildlife conclude in the opening of a 26 square mile area on Stonewall Mountain for limited access bighorn sheep hunting, this area will be managed for its recreational hunting potential.

WILDERNESS

FLPMA requires that BLM conduct inventories on public lands under its jurisdiction to determine roadless areas and islands which may have wilderness characteristics. An evaluation of the Nellis Range was conducted in 1978 with representatives of Sierra Club, Nevada Outdoor Recreation Association, University of Nevada-Reno Recreation Department, and Friends of Nevada Wilderness. The lands encompassed by the Groom Range Addition were inventoried during the

Nevada statewide inventory, conducted in 1979. As a result of these evaluations, it was determined that the Nellis Range did not contain any land that met the minimum criteria for consideration as a wilderness study area; therefore, no wilderness study areas have been recommended for further study within the planning area (U.S.DOI,BLM/USAF,1981:2-36).

Identified wilderness study areas within the Desert National Wildlife Range are under the sole jurisdiction and management of the USFWS (Public Land Order 4079); discussion of these lands and their management is beyond the scope of this document.

NATURAL AREAS

The Timber Mountain Caldera National Natural Landmark was designated in 1973. No decision will be made in this plan regarding the designation of additional Research Natural Areas, Outstanding Natural Areas or Natural Hazard Areas within the planning area; military use of the withdrawn lands restricts access and special use management to the extent that any additional designations would be premature. This option will become viable should any of the planning area be proposed for return to general public use.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

There are no designated areas of critical environmental concern (ACECs) in the planning area. ACEC proposals are discussed under each specific alternative.

FIRE MANAGEMENT

BLM will conduct fire management activities on the Nellis Range in accordance with the Fire Management Reciprocal Agreement between the USAF and BLM (see Appendix C). This agreement was updated in 1987 to incorporate management directions mandated by Congress in PL 99-606. Under this agreement, the BLM is authorized to conduct appropriate pre-suppression and suppression actions in the event of timber-brush and range fires resulting from non-military activities. The Secretary of the Military is also empowered by this MOU to request firefighting assistance from the BLM on fires resulting from military activities and permitted to transfer compensatory funds from the Department of the Air Force to the Bureau of Land Management.

ALTERNATIVE A–NO ACTION

Goal:

To continue current management direction within the framework of present laws and regulations, including existing Memoranda of Understanding and Cooperative Agreements. No new types of uses or changes in levels of use are proposed.

The objectives, directions, and actions stated below are in addition to those identified in Management Guidance Common to All Alternatives.

ISSUE 1: VEGETATION

Objectives:

To maintain a static to upward apparent trend in vegetation characteristics through control of grazing pressure on the Nevada Wild Horse Range.

To limit utilization of key forage plant species at a level not to exceed the allowable use factors by more than 10 percent on the Nevada Wild Horse Range.

Management Direction:

1. Continue to develop and maintain permanent water sources on the Nevada Wild Horse Range to achieve proper distribution of wild horses and utilization of forage.

2. Develop and maintain water sources on the Bald Mountain allotment to achieve proper distribution of livestock and utilization of forage.

3. Monitor vegetation characteristics on the Nevada Wild Horse Range and the Bald Mountain allotment to determine the effectiveness of management actions.

Management Action:

None.

ISSUE 2: WILDLIFE HABITAT

Objective:

To maintain existing wildlife habitat conditions to support current wildlife population levels.

Management Direction:

1. Continue to cooperate with the participating agencies in conducting resource inventories and developing activity plans.

2. Continue to prohibit the introduction of exotic plant or animal species on the planning area.

3. Continue to use chemical toxicants for control of nuisance species in accordance with Federal and State laws.

4. Conduct studies to determine the condition of the vegetative resource.

5. Continue to cooperate to protect and preserve the habitat of threatened and endangered species.

6. Continue to reserve forage for wildlife in the Bald Mountain grazing allotment at current levels (370 AUMS for deer).

Management Action:

None.

ISSUE 3: WILD HORSES

Objectives:

To maintain and manage populations of wild, free-roaming horses on the Nevada Wild Horse Range, subordinate only to the military use of the withdrawn area.

To maintain the Nellis Air Force Range as a burro-free area.

Specific habitat and population objectives, as identified in the Nevada Wild Horse Range HMAP, are as follows:

A. Habitat Objectives:

1. Determine key areas and key forage plant species for wild horses within one year (completed 1986).

2. Allow utilization of key forage plant species by horses to exceed the allowable use factor, by no more than 10 percent, on the Nevada Wild Horse Range.

3. Maintain a static to upward apparent trend in vegetation characteristics through control of grazing pressure.

4. Minimize the incidence of wild horses being unable to obtain sufficient drinking water at specific water sources.

B. Population Objectives:

1. Monitor the physical condition of wild horses and maintain animals in fair to good condition.

2. Acquire additional data on wild horses to better understand the forces that affect wild horse populations.

3. Determine wild horse seasonal movement and distribution patterns within the next five years (by 1990).

4. Enhance the gray and roan color markings in the Kawich Valley Area and palomino, dun, and buckskin color markings in Cactus Flat and Gold Flat Areas.

5. Preserve 10 head of pintos from the Stonewall Mountain Area by relocating them in the appropriate Herd Management Areas.

6. Manage wild horses on the Nellis Air Force Range with the objective of maintaining the home range wholly within the Nevada Wild Horse Range.

Management Direction:

1. Continue to conduct annual censuses to determine wild horse populations on the Nevada Wild Horse Range and the remainder of the planning area.

2. Initiate gathering contracts, prior to reaching allowable use levels, in order to assure that population reductions occur before utilization exceeds 60 percent.

3. Continue to conduct gatherings, relocations, and removals to enhance color markings in specified areas.

4. Continue to conduct gatherings to achieve the initial management level.

5. Continue to monitor the physical condition of wild horses.

6. Conduct studies to determine productivity and survival, sex ratios, age structure, seasonal movement, and home ranges.

7. Continue to develop and maintain permanent water sources on the Nevada Wild Horse Range.

8. Conduct gatherings to remove all burros found on the withdrawn area.

9. Conduct vegetation trend and utilization studies.

Management Actions:

1. Relocate 10 pintos from Stonewall Mountain Herd Use Area to the Nevada Wild Horse Range (completed 1987).

2. Conduct gatherings, relocations, and removals to achieve the initial management level of 2000 head on the Nevada Wild Horse Range.

3. Remove all burros from the Nellis Air Force Range and selectively fence areas of the boundary to prevent the movement of burros onto the Nellis Range.

4. Develop or improve water sources at the following springs: Cedar Wells, Upper and Lower Corral, Silverbow, Rose, Tunnel, and Cedar Springs.

ALTERNATIVE B–PREFERRED ALTERNATIVE

Goal:

This alternative would direct management attention toward improving rangeland vegetative conditions and wildlife habitat by achieving and maintaining the appropriate management level for the wild horse population on the planning area. BLM will not propose or authorize any new uses unless they contribute to improved conditions; existing use levels will be adjusted to provide for improved conditions.

ISSUE 1: VEGETATION

Objectives:

To maintain existing species diversity and composition at existing ecological stages, except in disturbed and riparian areas.

To protect and, if necessary, to improve or restore the condition of riparian areas.

To maintain a static to upward apparent trend in vegetation characteristics through control of grazing pressure.

To limit utilization of key forage plant species at a level not to exceed the allowable use factors.

Management Direction:

1. Use species native to the area for any revegetation efforts.

2. Restrict surface-disturbing activities in special status plant species habitat or riparian areas.

3. Continue to develop and maintain permanent water sources on the Nevada Wild Horse Range to achieve proper distribution of horses and utilization of forage.

4. Develop and maintain water sources on the Bald Mountain grazing allotment to achieve proper distribution of livestock and utilization of forage.

5. Use fencing only when monitoring demonstrates that other management practices are not successful in achieving the identified objectives.

6. Protect and enhance riparian habitat areas on the Nevada Wild Horse Range and on the Bald Mountain grazing allotment.

7. Monitor vegetation resources on the planning area to determine the effectiveness of management actions.

Management Actions:

1. Develop activity plans for riparian areas throughout the planning area. These plans would include measures to protect and/or restore riparian areas, including, but not limited to, the removal of all wild horses in excess of the appropriate management level; the immediate removal of all problem animals; and the manipulation of wild horse and livestock distribution through the use of water sources.

2. If monitoring demonstrates that the above-listed management practices are not successful in protecting and/or restoring the productivity of riparian areas, construct and maintain up to 50 miles of fence to exclude wild horses and livestock from riparian areas.

ISSUE 2: WILDLIFE HABITAT

Objectives:

To manage wildlife habitat (exclusive of the Nevada Wild Horse Range and the Bald Mountain grazing allotment) for maximum wildlife value.

To manage wildlife habitat within the Nevada Wild Horse Range and the Bald Mountain grazing allotment to sustain viable wildlife populations.

To protect threatened and endangered wildlife and their habitat.

Management Direction:

1. All forage outside the boundaries of the Nevada Wild Horse Range and the Bald Mountain grazing allotment will be reserved for wildlife.

2. Continue to reserve forage for wildlife in the Bald Mountain grazing allotment at current levels (370 AUMS for deer).

3. Reserve all forage on the Nevada Wild Horse Range, in excess of the amount necessary to maintain the appropriate management level of wild horses, for wildlife use.

4. Provide permanent water sources for wildlife on the Nevada Wild Horse Range and the Bald Mountain grazing allotment.

5. Conduct monitoring as a joint effort, in conjunction with the Air Force and the Nevada Department of Wildlife.

Management Actions:

1. Develop and maintain up to 20 water sources for wildlife within the Nevada Wild Horse Range and the Bald Mountain grazing allotment.

2. If monitoring indicates the need, build and maintain up to 30 miles of boundary fence on the Bald Mountain grazing allotment to prevent livestock from drifting off the allotment.

ISSUE 3: WILD HORSES

Objectives:

To maintain and manage populations of wild, free-roaming horses only on the Nevada Wild Horse Range.

To maintain the Nellis Air Force Range as a burro-free area.

Management Direction:

1. Set an appropriate management level of 1000 wild horses for the Nevada Wild Horse Range.

2. Make adjustments to the appropriate management level using data obtained from monitoring.

3. Develop and implement a problem animal removal program for the planning area. Problem animals will be defined as those wild horses consistently found outside of the Nevada Wild Horse Range.

4. Continue to conduct annual censuses to determine wild horse populations on the Nevada Wild Horse Range and the remainder of the planning area.

5. Continue to conduct gatherings, relocations and removals to enhance color markings in specified areas.

6. Continue to monitor the physical condition of wild horses.

7. Continue to conduct studies to determine productivity, survival, sex ratios, age structure, seasonal movement, and home ranges.

8. Continue to develop and maintain permanent water sources on the Nevada Wild Horse Range.

9. Continue to conduct vegetation trend and utilization studies.

10. Use fencing only when monitoring demonstrates that other management practices are not successful in achieving the identified objectives.

Management Actions:

1. Conduct gatherings, relocations, and removals to achieve the appropriate management level on the Nevada Wild Horse Range.

2. Conduct gatherings to remove all problem animals (wild horses) found outside the boundaries of the Nevada Wild Horse Range on the planning area.

3. Develop or improve water sources on the Nevada Wild Horse Range, including, but not limited to, the

following springs: Cedar Wells, Upper and Lower Corral, Silverbow, Rose, Tunnel, and Cedar Springs.

4. Remove all burros from the planning area.

5. Amend the Nevada Wild Horse Range HMAP to conform with this resource plan.

6. If monitoring demonstrates that the above management practices are not successful in preventing wild horse use outside of the Nevada Wild Horse Range, build and maintain up to 125 miles of boundary fence on the Nevada Wild Horse Range.

7. If monitoring demonstrates that the above management practices are not preventing wild horses and burros from moving onto the planning area from adjacent lands, build and maintain up to 75 miles of fence to selectively fence the boundary of the planning area.

VISUAL RESOURCES

Objectives:

To maintain the integrity of visual resources in natural areas.

To protect visual resources in the planning area while allowing for development.

Management Direction:

1. Assign visual resource management (VRM) classes in accordance with BLM guidance and policy.

2. Ensure all actions initiated or authorized by BLM are in compliance with VRM guidelines.

Management Actions:

1. Designate the Timber Mountain Caldera National Natural Landmark as a VRM Interim Class II area.

2. Designate the remainder of the planning area as VRM Interim Class IV.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Objective:

To protect officially recognized natural areas.

Management Direction:

1. All officially recognized natural areas will be designated as ACECs.

2. All ACECs will be managed primarily for their natural values.

Management Action:

1. Designate the portion of the Timber Mountain Caldera National Natural Landmark located within the planning area as an ACEC.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

In developing the alternatives, the following proposals were suggested, considered, and subsequently eliminated from detailed analysis for the following reasons:

Minerals

An alternative was proposed that would have analyzed those lands within the Nellis Air Force Range which could be considered suitable for opening to exploration and development of minerals. Pursuant to PL 99-606, the Nellis Range is withdrawn from all forms of appropriation under the mining law and the mineral leasing and geothermal leasing laws. In November, 1991 and every 5 years thereafter, BLM, with the concurrence of the Air Force, will determine which, if any, of the withdrawn public lands can then be considered for opening under the operation of the Mining Law of 1872, the Mineral Lands Leasing Act of 1920, as amended, the Mineral Leasing Act for Acquired Lands of 1947, the Geothermal Steam Act of 1970, or any one or more of such Acts.

Valid existing rights will continue to be recognized. At the time of the withdrawal, 25 unpatented mining claims and all or portions of two oil and gas leases were located within the Nellis Air Force Range. If any of the valid existing rights are eliminated by relinquishment, expiration or purchase by the Air Force, these rights will revert to the United States.

The mission of the Air Force on Nellis Air Force Range is vital to the security of the United States. The Nellis Air Force Range provides training for United States military forces and for those of Allied Nations. Past activities have resulted in surface disturbances, with

extensive areas being contaminated by radioactive and explosive materials. The Air Force has concluded that no lands within the Nellis Air Force Range are suitable for opening to mineral exploration and development. Such use would 1) interfere with the primary use of these lands for military purposes, 2) would present unacceptable health, safety, and welfare concerns for the public, and 3) would not conform with natural security needs.

Recreation Uses

Recreation uses such as ORV use, unconfined recreation, developed camping, and hunting were considered for the planning area. It was determined that these uses would interfere with the military mission and violate safety and security concerns. These various recreational opportunities are readily available on public land immediately adjacent to the Nellis Air Force Range.

Elimination of Wild Horses

Removal of all wild horses on the Nellis Air Force Range, including the Nevada Wild Horse Range, was considered as a possible alternative, thereby eliminating all conflicts between wild horses and military uses. PL 99-606, however, permits the continued existence and management of wild horses in the planning area. Either of the proposed alternatives, if fully implemented, would reduce those conflicts to a manageable level without entirely removing wild horses from the Nellis Air Force Range. Thus, this alternative was dropped from further analysis.

IMPLEMENTATION OF THE RESOURCE PLAN

Following the approval of the resource plan, the BLM and the Air Force will enter into an MOU to implement the plan. This MOU will establish the policies, procedures, and responsibilities for coordination and cooperation between the BLM and the Air Force.

Standard Operating Procedures

The following actions will be taken during the implementation stage of the plan to mitigate the impact of the management actions:

1) All management actions will require an environmental analysis prior to implementation. If, through the environmental assessment process, it is determined that significant impacts would occur that cannot be mitigated, the action will be modified or abandoned.

2) Permanent roads will not be constructed to project sites. Use will be made of existing access, off-road travel, or temporary roads which would be rehabilitated after construction activities are completed.

3) Cultural resource protection will require compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, Section 101 (b) (4) of the National Environmental Protection Act of 1969, and the American Indian Religious Freedom Act of 1978.

Prior to project approval, intensive field inventories will be conducted at project sites. If cultural or paleontological sites are found, every effort will be made to avoid adverse impacts. However, where this is not possible, the BLM will consult with the State Historic Preservation Officer and the Advisory Council on Historic Preservation in accordance with the MOU between the BLM and the Council, dated January 14, 1980.

4) All actions will be in compliance with the BLM's visual resource management procedures. For any project that would have a visual contrast rating in excess of the recommended maximum for the visual class zone in which it is proposed, the visual contrast will be considered significant and the need for mitigation measures will be examined.

5) The construction of fences, if necessary, will conform with the objectives and specification in BLM Manual 1737 to assure minimization of impacts to wildlife, wild horses, and visual resources.

6) If constructed, fences located in or around wild horse use areas will be flagged or otherwise marked for one year after construction to make them more visible to horses.

7) Wild horse gathering procedures will be designated so that captured animals are hauled in a safe, humane manner, death loss of captured is limited to less than 2 percent, and roundups do not occur six weeks before and after the peak foaling season.

8) The clearing of vegetation from project sites will be restricted to the minimum amount necessary.

9) All disturbed areas will be rehabilitated using plant species native to the area, where such action is necessary and practical, to replace ground cover and prevent erosion.

10) Long-term air quality will be protected as all BLM and BLM authorized activities must be designed to prevent air quality deterioration in excess of the established thresholds specified in the Nevada Ambient Air Quality Standards.

11) Spring improvement projects will be fenced and water will be piped away from the source to a trough or pond if necessary. Water will also be left at the spring source to create riparian vegetation for wildlife.

12) Bird ramps will be constructed at all watering troughs.

13) Water will be left available for wildlife at all developed spring sites.

MONITORING AND EVALUATION OF THE RESOURCE PLAN

This resource plan will be monitored and evaluated at five year intervals to determine if there is sufficient cause to warrant revision or amendment. The evaluation will consist of a review of the issues, objectives, and management actions. The review will determine if these components are meeting the needs of management and define necessary changes as appropriate.

CHAPTER 3

AFFECTED ENVIRONMENT

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INTRODUCTION

This chapter describes the environmental components of the planning area that could be impacted by the implementation of the alternatives. These components include lands, access, minerals, soils, water resources, air quality, vegetation, wildlife habitat, wild horses, livestock grazing, cultural resources, visual resources, recreation, wilderness, natural areas, and socio-economic conditions.

Much of the information contained within this chapter is extracted from the more detailed Management Situation Analysis (MSA) which is available for public review at the Caliente Resource Area and Las Vegas District offices of the BLM.

PHYSICAL SETTING

Topography

The topographic features of the planning area are typical of the Basin and Range Physiographic Province, with long, north-south trending mountain ranges separated by broad alluvium-filled valleys. Primary mountain ranges of the area are the Belted, Kawich, Cactus, Groom, Desert, Pintwater, and Spotted Ranges.

Elevations range from approximately 3,100 feet on the desert floor near Indian Springs to 9,380 feet on Bald Mountain in the Groom Mountain Range. The slope of the terrain increases from 10 percent or less on the valley floors to between 11 and 20 percent on the foothills. At the highest elevations, slopes can exceed 45 percent. Much of the upland terrain is heavily dissected by gullies and ephemeral washes that carry the infrequent rain water to playas on the desert floor below.

Climate

The Nellis Air Force Range has a semiarid climate with varied temperatures. Daily and seasonal temperatures fluctuate greatly and are influenced by general air movement and topography. Highest monthly temperatures occur during July and August, with a monthly average of 76 degrees Fahrenheit (F). Daily temperatures rise to above 90 degrees F and drop to the 50's at night. Average monthly winter temperatures fall between 31 degrees F and 41 degrees F.

The climate of the planning area is primarily influenced by two main sources of air movement. From fall through spring, the area is affected by northern and middle latitude Pacific air movements which cross the Sierra Nevada Mountains. As moist air moves east from the Pacific, the mountains deplete the moisture, creating a rain shadow effect over the Great Basin and Mojave deserts. In the summer and early fall, tropical air masses from southern Pacific zones and the Gulf of Mexico dominate the region.

Annual precipitation is dependent on elevation and varies on the average from 4 inches on the desert floor to about 20 inches at the highest elevations. The annual precipitation cycle is characterized by a double maximum, with the primary in winter and the secondary in summer. Winter precipitation often falls as snow (at higher elevations), while summer rains are associated with thunderstorms, many of sufficient intensity to produce localized flash flooding.

Prevailing winds are normally from the southwest, with average wind velocities ranging from 9 to 11 miles per hour in the morning, increasing to 11 to 13 miles per hour in the afternoon.

LANDS

Location and Land Status

The Nellis Air Force Range withdrawal includes public lands totaling approximately 3,035,326 acres in Clark, Nye, and Lincoln Counties, Nevada. The withdrawn area is subdivided into two management units: the 826,000 acres of the Desert National Wildlife Range, managed by the U.S. Fish and Wildlife Service for the protection and preservation of resident populations of desert bighorn sheep, and the 2,209,326 acre planning area addressed in this document (see Map 2). Patented mining claims, totaling 123 acres, are located within the Nellis Air Force Range; as these patented claims are in private ownership, their acreage is not included in the above-cited figures and they will not be further discussed in this document (see Map 4).

ACCESS

The Nellis Air Force Range is closed to general public access, as authorized by the Act, which recognizes military operations as the primary use of the withdrawn lands. This legislation authorizes the Secretary of the Air Force to close all (or portions of) the Nellis Range for security or safety reasons. Access to the Nellis Range is permitted by the Air Force for specific purposes and is subject to security clearance, scheduling, and safety constraints.

MINERALS

Mineral commodities found in the planning area include gold, silver, copper, lead, zinc, mercury, tungsten, turquoise, sand, gravel, and limestone. Potentially valuable deposits of sodium, potassium, alunite, and potash occur within this area. Portions of the Nellis Air Force Range fall within a zone of prospectively valuable oil and gas deposits located in the eastern half of the state.

With the exception of the Groom Mountain Range, little or no mineral exploration or related activity has occurred on the Nellis Air Force Range for nearly a half century; military withdrawal of the land has also suspended the operation of the mining laws.

Within the Groom Mountain Range area, mining activities began in the mid-19th century and have continued to the present day. Mining claims and prospecting activities have been concentrated at four general locations along the west flank of the range and at one location on the northeastern edge of the area (see Map 4). Included within the planning area are all of the Groom mining district and portions of the Don Dale District; the largest and most productive properties within the Groom district are the Groom mine and adjacent Black Metal mine.

A more detailed description of the mineral resource potential of the existing environment for the Nellis Air Force Range is found in the Final Environmental Impact Statement for the Proposed Public Land Withdrawal, Nellis Air Force Bombing Range, Nye, Clark, and Lincoln Counties, Nevada (1981) and in the Final Environmental Impact Statement for the Groom Mountain Range, Lincoln County, Nevada (1986). (See Appendix H for copies of specific text from both of these documents.)

SOIL, WATER, AND AIR RESOURCES

Soils

To date, no comprehensive soil surveys of the planning area have been completed by the Soil Conservation Service (SCS). Evaluations by the SCS of sites with similar vegetation suggest that the dominant soils can be classified into three categories closely related to the natural units.

Alluvial soil pediments comprise the first category and consist of shallow alluvial sediments located on coalescing alluvial fans and steeper interfluve sideslopes. These soils are usually shallow or moderately deep to hardpans. Surface stoniness generally increases upslope, forming a gravelly desert pavement on some soil surfaces.

The second category consists of deep alluvial sediments found in dry lakes and valley bottoms. These soils occur below 4,500 feet in elevation and include minor inter-bedded tuffs and gravels that are generally more than 1,000 feet thick. The lowest position of this material type is occupied by dry lake beds with dune margins of either sand or clayey materials. Moderate to strongly saline soils generally surround these areas; texture ranges from medium to moderately coarse and gravel content from none to very gravelly conditions.

The third soils category occurs on mountains and hills and includes three subgroups, located in different portions of the planning area.

Subgroup 1 includes mountains and hills generally concentrated in the northern and western parts of the Nellis Air Force Range. The general appearance of this group is more rounded and less rugged than other mountains on the planning area, with rock outcrops and woodland vegetation consisting of Pinyon Pine and Juniper. Soils of this area are moderately deep to hardpan or bedrock. Texture is usually moderately fine to coarse and includes various amounts of gravel. These soils have a moderately low storage capacity for water, an exceptionally high base exchange capacity and are usually neutral or mildly alkaline in reaction. Slopes commonly range from 15 to 50 percent.

Subgroup 2 is prevalent in the southeastern part of the Nellis Air Force Range and is typified by steep,

rugged mountains and hills composed of limestone and dolomite rocks. Gypsum and quartzite occur in limited areas. Dominant vegetation is the Pinyon-Juniper Woodland with occasional small stands of Bristlecone and Ponderosa Pine. Soils are generally shallow to hardpan or bedrock, moderately alkaline and have low water holding capacity. Slopes commonly exceed 30 percent and rock outcrops are numerous.

Subgroup 3 is of relatively minor significance on the planning area, consisting of two small mountains in the northwest part of the Nellis Range. Shrub or woodland vegetation occur on the area, but with less density than that on other mountainous formations. Soils are commonly coarsely textured and moderately deep to bedrock. Water holding capacity is low, as is fertility potential. Such soils are neutral to mildly alkaline in reaction and are commonly nonsaline.

Soil Erosion

With the exception of the Groom Mountain Range, the erosion potential of soils on the planning area has not been determined. A qualitative evaluation can, however, be made from the soil types and slope angles. In general, finer textured soils are more susceptible to water erosion, while sandy soils and granulated clays are most easily eroded by wind. Slope angles increase the potential for erosion: given the known slope angles of the lands comprising the Nellis Air Force Range, it is suggested that the area's susceptibility to erosion ranges from moderate to high. Water erosion characteristics are demonstrated by the many gullies and channels leading from the mountain ranges to the playas on the desert floor.

Soil erosion potential has been estimated at 21 field sites within the Groom Mountain Range portion of the planning area. Using 15 erosion classes for each of six variables (bare ground, presence of a vesicular crust, litter, wind erosion, rills, and the presence of gullies), field tests established most ratings as stable, with a few categories at some locations rated as slight to moderate relative to erosion. Upland habitats were generally only slightly eroded, although some gully erosion, probably related to recent heavy storms, was noted. Rill erosion was virtually non-existent. There was also some evidence of litter movement and accumulation on some sites. Overall, the entire Groom Mountain Range area is not heavily eroded and surface soils are stable (USAF/U.S.DOI, BLM, 1985:3:9).

Water Resources

The precipitation pattern in Nevada is directly related to topographic relief. Higher elevations generally receive more rainfall (including snow) than lower elevations. High precipitation areas provide recharge to the groundwater system and serve as a source for the springs. Breen Creek, traversing the northeast corner of the Nellis Air Force Range near Silverbow Spring, is the only perennial stream in the planning area; no natural lakes occur within the Nellis Range. Surface drainage from the northern portions of the area collects into the Kawich, Gold Flat, Cactus Flat and Stonewall Flat playas. Fortymile Canyon, originating on Pahute Mesa, drains into the normally dry Amargosa River, with an ultimate destination of Death Valley. Runoff from the southern half of the withdrawal area is similarly dissipated in the playas of Three Finger Lake Valley and Indian Springs Valley. Surface drainage from the west side of the Groom Mountain Range flows toward playa areas in Emigrant Valley, while any surface flow from the east side moves toward the southeast to the center of Tikaboo Valley.

While surface drainage patterns are quite evident on the Nellis Air Force Range, detailed subsurface drainage in many areas remains unknown. Estimates of quantities and directions of flow have been made for the valleys within the planning area (Rush, 1970, Winograd, 1970, Rice, 1984 and State of Nevada, Division of Water Resources Map, prepared 1971). Those estimates can be summarized as follow:

> *"The Cactus Flat ground-water system has been little studied and developed because of its isolation. It is probably part of the groundwater system discharging in Sarcobatus Flat northwest of Beatty along Highway 95, as are Stonewall Flat to the southwest of Cactus Flat and Lida Valley farther to the southwest. The number of wells available for study and the depth of the studies are not sufficient, however, to preclude entirely the possibility that Cactus Flat, like Gold Flat to its southeast, is part of the Pahute Mesa ground-water system, in which case its ground water flows south to discharge eventually in the Amargosa Desert southeast of Beatty, Nevada" (U.S.DOI, BLM/USAF, 1981:2-13).*

Groundwater drainage from the southern and central portions of the planning area is a part of the Ash Meadows and Pahute Mesa groundwater systems. The Pahute Mesa system, at approximately 4,700 feet

above mean sea level, in part moves southward beneath the Pahute Mesa, Fortymile Canyon, and Crater Flat toward the Amargosa Desert, and in part, flows southwestward to Oasis Valley near Beatty. Groundwater in Oasis Valley moves southward into the Amargosa Desert through gravel sands of the ancestral Amargosa River channel and underlying fractured rocks. The Ash Meadows Groundwater system generally moves downward through alluvium and volcanic rocks to the Paleozoic carbonate rocks, then flows generally southwestward, finally discharging in Ash Meadows.

Most of the annual discharge from the two groundwater systems, approximately 17,000 acre-feet from the Ash Meadows and 10,000 acre-feet from Pahute Mesa, is transpired by plants or evaporated from soils and playas in the Amargosa Desert. The Amargosa Desert Water system is used to support agricultural operations in that area of the desert. Flow in the system occurs mainly through fractures in the massive carbonate and volcanic rocks. Groundwater velocity beneath the Pahute Mesa area has been estimated between 7 to 250 feet per year with the most acceptable value being about 15 feet per year.

Recent studies (Rush,1970, Rice,1984) indicate that the Groom Mountain Range constitutes an area of significant recharge within the eastern portions of the planning area. Groundwater quantities and direction of movement in this region are, however, not well defined.

The quality of water available on the Nellis Air Force Range is generally good for domestic purposes and suitable for livestock, wild horse, and wildlife use.

Air Quality

The Nellis Air Force Range is located within two Air Quality Control Regions (AQCR), the Clark-Mohave Interstate AQCR and the Nevada Intrastate AQCR. The Clark-Mohave Interstate AQCR boundary coincides with the county boundary common to Lincoln and Clark, and the western boundary common to the Nye and Clark County Line. The remainder of the planning area is located within the Nevada Intrastate AQCR which comprises the bulk of the state. The EPA's review of the states' attainment status of the National Ambient Air Quality Standards (published in the Federal Register, Vol.43, No.43, March 3,1978) indicates the following status for the Nellis Air Force Range area: total suspended particulate matter (TSP) and sulfur dioxide (SO_2) are lower than national standards; and carbon monoxide (CO), nitrogen oxides (NO_2), and ozone (O_3) are lower than standards or cannot be classified.

An assessment of the meteorological potential for air pollution was completed in 1979, using the Holzworth studies. The conclusion of this assessment was that the dispersion characteristics for the Nellis Air Force Range are good to fair and that the highest potential for exceeding air quality standards occurs in the valleys during the winter months of December, January, and February.

VEGETATION

The planning area is characterized by a high diversity of vegetative communities. The transition from the Great Basin Desert to the north and the Mojave Desert to the south occurs on the northern portion of the Nellis Air Force Range. The southern portion of the planning area is dominated by communities typical of the eastern Mojave Desert. Plant associations vary geographically and with elevation. Descriptions and locations (see Map 5) of the major plant communities are as follows:

1. Saltbush Community: This community is found at the lower elevations of the planning area, occurring from below 4,000 feet to about 5,000 feet, in valley bottoms, on playas and bajadas. Dominant shrub species of this community include four-wing saltbush (Atriplex canescens), shadscale (Atriplex confertifolia), green ephedra (Ephedra viridis), seep weed (Suaeda torreyana var. ramosissima), and bud sagebrush (Artemisia spinescens).

2. Creosote Bush Scrub Community: On lower elevation bajadas, creosote bush (Larrea tridentata) occurs either in conjunction with the saltbush community or as a distinct community, depending on soil conditions. Common forbs and grasses include halogeton (Halogeton glomerata), Indian ricegrass (Oryzopsis hymenoides), Russian thistle (Salsola sp.), and mesa dropseed (Sporobolus flexuosus).

3. Mixed Mojave Community: This broad community type, which may be further divided into several ecological sites, consists of a mixture of shrubs characteristic of the Mojave Desert. This community generally occurs on tuff or alluvial deposits in the southeastern portions of the Range at elevations generally between 4,500 feet and

5,500 feet. Joshua tree (Yucca brevifolia) is a

conspicuous overstory species in this community. Dominant shrubs are smooth horsebrush (Tetradymia glabrata), spiny menodora (Menodora spinescens), hymenoclea (Hymenoclea salsola), box thorn (Lycium andersonii), green ephedra, green rabbitbrush (Chrysothamnus viscidiflorus), Nevada jointfir (Ephedra nevadensis), and four-wing saltbush. Common grasses are big galleta (Hilaria rigida), Indian ricegrass (Oryzopsis hymenoides), and fluffgrass (Erioneuron pulchellum). Conspicuous cacti are cottontop barrel cactus (Echinocactus polycephalus) and prickly pear (Opuntia echinocarpa).

4. Blackbrush Community: The Blackbrush (Coleogyne ramosissima) community is found in zones which are intermediate between Mixed Mojave and Sagebrush community types and marks the interface between the Great Basin and Mojave deserts. At lower elevations, it dominates the upper bajadas above the Mixed Mojave community type; at higher elevations it interfaces with Sagebrush communities, but often forms pure stands on drier south- or west- facing slopes. Subordinate shrubs in the Blackbrush Community include desert bitterbrush (Purshia glandulosa), big sagebrush (Artemisia tridentata), black sagebrush (Artemisia nova), Nevada jointfir, and green rabbitbrush. Grass cover tends to be quite low in this community, with dominants being squirreltail (Sitanion hystrix), Indian ricegrass, and galleta (Hilaria jamesii). When blackbrush is burned or otherwise disturbed, purple three awn (Aristida purpurea) dominates the site. Grizzlybear pricklypear (Opuntia erinacea), and strawtop pricklypear (Opuntia echinocarpa) are common in this vegetation association.

5. Sagebrush Community: This community is dominated by a mosaic of black sagebrush and big sagebrush, which occur on a variety of parent materials at intermediate elevations above 5,000 feet. Big sagebrush occurs on deeper, sandy soils on mesas and in drainages and valley bottoms, whereas black sagebrush occupies shallower, rocky soils of ridges and hillsides. Often these two sage species occur as co-dominants. Subordinate trees and shrubs in this community are single needle pinyon (Pinus monophylla), Utah juniper (Juniperus osteosperma), desert bitterbrush, Nevada jointfir, green ephedra, and cliffrose (Cowania mexicana). Representative grasses of this community type include squirreltail, galleta, Indian ricegrass, and desert needlegrass (Stipa speciosa). The major cacti occurring in this community type are grizzlybear and strawtop pricklypear.

A distinct plant association within this community type occurs on the volcanic summit and summit ridges of Bald Mountain in the Groom Mountain Range, above the 9,000 foot elevation. Dominant species in this association are black sagebrush, mountain big sagebrush (Artemisia tridentata ssp. vaseyana), green rabbitbrush (Chrysothamnus viscidiflorus var. viscidiflorus)), gray horsebrush (Tetradymia canescens), Paronychia jamesii, and winterfat (Eurotia lanata). Grass cover is very high in this plant association and is dominated by mutton grass (Poa fendleriana) and squirreltail.

6. Pinyon-Juniper Community: Single needle pinyon and Utah juniper become dominant constituents with sagebrush at about 6,000 feet, along drainages and on north-facing slopes. They continue to form discontinuous stands up to about 7,800 feet, creating a vegetation belt at these elevations across most of the Nellis Air Force Range. Understory shrubs in this community are black sagebrush, big sagebrush, desert bitterbrush, cliffrose, green ephedra, and green rabbitbrush. Common grasses are needle-and-thread (Stipa comata) and squirreltail, with prickly pear being the most conspicuous cactus.

7. Pinyon Community: Single needle pinyon occupies discontinuous pure stands above 6,300 feet, forming a fairly continuous forest at elevations between 7,500 feet and 8,500 feet. The Pinyon community is found primarily on rocky volcanic substrates. Understory shrubs in this community are identical to those in the Pinyon-Juniper community, although current (Ribes velutinum) and Gambel's oak (Quercus gambelii) are also found as localized co-dominants. The dominant grass is mutton grass; the cactus prickly pear is found in scattered locations.

8. Mountain Mahogany Community: This community type is a distinct association of mountain mahogany (Cercocarpus ledifolius), single needle pinyon, and Utah juniper. It is restricted to the top of limestone ridges at elevations between 6,700 feet and 7,800 feet. Subordinate shrubs in this community type are cliffrose, buck brush (Ceanothus greggii), Forsellesia nevadensis, black sagebrush, and green ephedra. The dominant grass in this community

type is squirreltail; the grizzlybear pricklypear occurs occasionally.

9. White fir Community: A small, distinct community of white fir (Abies concolor) occurs on north and east-facing volcanic slopes of selected ranges, i.e. Groom Mountain Range, at elevations between 8,600 feet and 9,100 feet. Also present within this forest type are scattered examples of limber pine (Pinus flexilis) and single needle pinyon. White fir also extends below 8600 feet on the ridges of Bald Mountain in the Groom Range as a minor component of the pinyon forest community. The understory of the White Fire community is dominated by the mutton grass and, to a lesser extent, by the shrub mountain big sagebrush.

10. Riparian Vegetative Communities: These communities presently occur only along sections of Breen Creek in the northeastern portion of the planning area. Breen Creek is a perennial stream which flows for a distance varying from 1 to 7 miles, depending on yearly precipitation levels. Riparian vegetation survives along its banks only in those areas where topographic features deny wild horses access to the stream. Species typical of these communities include box elder (Acer negundo), ash (Fraxinus spp.), cottonwood (Populus spp.), desert willow (Chilopsis linearis), rabbitbrush (Chrysothamnus spp.), sedge (Carex spp.), rush (Juncus spp.) and cat-tail (Typha latifolia). Other spring sources within the Nevada Wild Horse Range, although not as extensive as Breen Creek, could potentially support riparian vegetation; excessive wild horse usage and man-made developments however, have eliminated riparian communities at these sites.

Soils surveys, which are the first step required to establish ecological site ratings, have not been conducted on the planning area; therefore, vegetative ecological condition has not been determined. Vegetative trend study sites were installed in 1981, but have not been monitored since that date.

It is estimated that ecological condition on the planning area has been seriously degraded within a 4.5 mile radius of water sources (814,300 acres-37 percent of the planning area) and is currently in a early seral stage (within one-half mile of water sources) to a mid seral stage (between one-half mile and 4.5 miles). Riparian vegetation along Breen Creek (approximately 150 acres), the only perennial stream in the planning area, and at six developed and 14 undeveloped spring sources has been severely overgrazed and in some cases, eliminated. The remainder of wild horse habitat (969,550 acres-44 percent of the planning area) is estimated to be in a mid seral stage due to heavy grazing from approximately 5000 wild horses (150 percent in excess of the initial management level). Vegetation trend within these areas is downward or retrogressive (a change away from the original climax vegetative community).

Studies within the Bald Mountain grazing allotment indicate a static trend in vegetation, at a mid seral successional stage. No trend studies have been conducted on the Naquinta Springs allotment.

WILDLIFE HABITAT

Most of the Nellis Air Force Range has not been inventoried for wildlife species. The Nevada Test Site, the Desert National Wildlife Range, and adjacent public lands outside the planning area have been extensively inventoried. Due to the similarity of habitats, many of the species occurring on the Test Site can be expected to also occur on the Nellis Range. Appendix F lists the predominate species anticipated to be found on the Nellis Air Force Range.

The game species predicted to occur on the planning area are described below; distributions for these species are shown on Map 6.

Chukar partridge are found on the northeast part of the Nevada Test Site and throughout the remainder of the Test Site, although limited to within a few miles of water. Chukar are known to occur on the north and east slopes and lowlands of the Groom Mountain Range and are, therefore, expected to occur throughout the Nellis Range in suitable habitat.

Bighorn sheep are known to occur on the planning area in the Pintwater, Desert, and Stonewall Mountain Ranges, and northwest and northeast of the Nevada Test Site. Nevada Department of Wildlife estimates of bighorn sheep populations for 1987 are 275 animals for the Pintwater Range and 130 sheep for the Desert Range.

Mule deer are found throughout much of the planning area, but, according to the U.S. Fish and Wildlife Service, are not known to occur on the Desert National Wildlife Range. Greater numbers are generally found in woodlands; an inventory within the Nevada Test Site revealed 1,500 to 2,000 animals on summer range (Rainier and Paiute Mesa).

Pronghorn antelope are found west of the Groom Range, occupying the foothills and valleys. Main concentrations of pronghorn are in the northern portion of Cactus Flat and all of Kawich Valley, with occasional sightings around Stonewall Mountain. The range of pronghorn antelope movements is extended farther from available waters during the winter and, conversely, restricted to within a few miles of water during the summer months.

SPECIAL STATUS SPECIES

No Federally listed threatened or endangered species are known to occur within the planning area. One plant species known to occur on the Range, Astragalus beatleyae, is currently a Federal Category 1 species (appropriate for listing based on biological vulnerability and threats, but data concerning habitat requirements and, in some cases, precise boundaries of critical habitat are still being compiled) and is listed on the Nevada Critically Endangered Species List. Appendix F provides the Federal status of the candidate and sensitive plant species for the Nellis Air Force Range. Map 7 shows the known location sites of these species within the planning area.

The desert tortoise (Gopherus agassizii), a Federal Category 2 species (possibly appropriate for listing, but data on biological vulnerability and threats are not currently known or on file with USFWS), has been sighted approximately 10 miles north of Mercury on the Nevada Test Site.(pers. commun. Giles, 1988). Desert tortoise habitat is expected to occur in areas below 4000 feet in the Mojave desert biome within the planning area; the extent to which this habitat is being utilized has not been determined at this time.

The endangered peregrine falcon (Falco peregrinus) may occur on the Nellis Air Force Range. Species that are candidates for Federal Listing and that are likely to occur on the planning area include the ferruginous hawk (Buteo regalis), Swainson's hawk (Buteo swainsoni), mountain plover (Chadrius montanus), Western snowy plover (Chadrius alexandrus), white-faced ibis (Plegadis chihi) and the long-billed curlew (Numenius americanus).

WILD HORSES

Located in the north central portion of the planning area and comprising 394,000 acres, the Nevada Wild Horse Range is managed by the BLM for the protection of wild horses and the maintenance of ecologically balanced population levels. The Nevada Wild Horse Range was established in 1962 through a cooperative management agreement between the Commander of the Nellis Air Force Range and the Bureau of Land Management; subsequent cooperative agreements, the most recent in 1977, have further defined management responsibilities and established procedures to be followed regarding wild horse management on the Nellis Range.

In 1963, 200 wild horses were estimated to occur on the Nevada Wild Horse Range. The only Herd Management Area identified in response to the Wild, Free-Roaming Horse and Burro Act of 1971 was the area encompassed by the Nevada Wild Horse Range, although horses were seen on an occasional basis throughout the northwest portion of the planning area. A census conducted on the ground in 1973 revealed 800 horses on the Nevada Wild Horse Range. Since that date, wild horse herds have expanded their numbers and currently roam over most of the north portion of the Nellis Air Force Range. The BLM and USAF have been conducting aerial censuses since 1976; the latest aerial census (conducted in September 1987) revealed a population level of 4178 wild horses. Assuming a recruitment rate of 15 percent, the current population is projected to be 4,805 wild horses. This represents a population 150 percent in excess of the appropriate management level of 2000 head recommended by the Coordination and Consultation Committee that assisted in the preparation of the Nevada Wild Horse Range Herd Management Area Plan (HMAP).

The predominant horse colors are bay, brown, and sorrel. Certain areas are developing distinctive color characteristics: palominos, duns, and buckskins are seen in the north Cactus Flat and east Mud Lake areas, while grays and roans are becoming more frequent in the Kawich Mountain and Valley region.

The Kawich Valley, Cactus Flat/Gold Flat, Goldfield Hills, and Stonewall Mountain areas, all in the north-central and northwestern portions of the planning area, were identified as major horse use areas in the early 1980's. (See Map 8). Portions of the Kawich Valley and Cactus Flat/Gold Flat horse use areas are contained within the Nevada Wild Horse Range. In these areas, wild horses were observed to concentrate close to water sources during the dry summer months. Winter range can extend 15-25 miles from known water sources.

Burros were not seen on the Nellis Air Force Range until 1980, when 69 head were counted. These burros were located in the vicinity of Mud Lake and on Stonewall Mountain at the western boundary of the planning area. Burro numbers reached a maximum of 195 in 1982. By September of 1987, removals and the

fencing of 35 miles of the western boundary of the Nellis Range had reduced the number of burros to four head.

LIVESTOCK GRAZING

Authorized livestock grazing on the Nellis Air Force Range was discontinued in 1959. By 1965, all grazing permits and leases had been eliminated by the Air Force, under the authority of Air Force Real Estate Directive 592.2. With the addition of the Groom Mountain Range to the withdrawn area, the Naquinta Springs allotment and a portion of the Bald Mountain allotment are now included within the planning area (see Map 8).

The Naquinta Springs allotment does not have any forage allocated for livestock grazing and is currently inactive.

The Bald Mountain allotment is held by D4 Enterprises and grazing is authorized at 5,811 AUMs active use. This allotment has been assigned to the Maintenance Category for the purposes of prioritizing available funds and personnel in cost- effective rangeland management. Maintenance Category criteria describe present range condition on the allotment as satisfactory, with moderate to high resource production potential and no serious existing resource conflicts. Since 1978, the constraints discussed in the Chapter 1-Introduction section of this document have prevented the BLM from conducting any on-the-ground management of the Naquinta Springs allotment or that portion of the Bald Mountain allotment located within the planning area.

CULTURAL RESOURCES

Cultural resources are non-renewable resources which cannot be repaired or replaced if damaged or destroyed; adequate management is essential to these unique and vulnerable resources. BLM uses the term "cultural resources" to indicate all sites and isolated manifestations, both prehistoric and historic.

Paleontological resources are managed under the Cultural Resource Management Program.

Cultural Resources

Limited field inventories indicate that cultural resources are present in all parts of the planning area. Prehistoric cultural resources reflect human adaptations to the region from approximately 10,000 B.C. to the time of Anglo- European contact. Site types include residential bases, long and short-term campsites and activity loci. Activity sites generally reflect resource procurement and processing strategies and include quarries, lithic scatters, pinyon and other plant processing locales, hunting blinds, aboriginal trails, and rock alignments. Other cultural manifestations include rock art sites containing petroglyphs and/or pictographs.

Historic resources generally consist of the material remains of late 19th and early 20th century mining, ranching, transportation, and communication activities. Historic aboriginal settlements and activity sites, evidence of Western Shoshone and Southern Paiute lifeways, are also present.

Of the approximately 1,750 cultural resources recorded on the planning area, nearly one-third evidence potential eligibility for National Register of Historic Places, as stated in 36 CFR 60.4. The present condition of many of these resources is unknown, as a result of the access constraints imposed by the military withdrawal of the lands. Most of the Nellis Air Force Range has been closed to the public since the early 1940's, thus affording protection from large-scale looting and other types of vandalism. Some unauthorized collection of artifacts has been reported in the past (Bergin, 1979:114) and may continue to impact the integrity of sites within the planning area. Trampling by wild horses and livestock in those areas where large numbers of animals congregate, particularly at water sources, may damage artifacts and alter the spatial patterning of archeological sites.

Paleontological Resources

Paleontological resources consist of the fossil record of past plant and animal life. The geologic history of southern Nevada is preserved in the fossil record, portions of which are exposed on the Nellis Air Force Range. Four general ages of sedimentary rocks, dating from 600 million years ago to approximately one million years ago, contain evidence of past plant and animal life. Strata from the Lower, Middle and Upper Paleozoic (600-300 million years ago) and Pleistocene outcrops (one million years ago to 10,000 years ago) are visible in various mountain ranges contained within the planning area.

VISUAL RESOURCES

An inventory of visual resources and development of Visual Resources Management (VRM) classes (based on scenic quality, visual sensitivity, and distance zone criteria) for the Groom Mountain Range addition was completed during the preparation of the Caliente

Management Framework Plan (see Map 3). VRM classes have not been designated for the remainder of the planning area.

RECREATION

Recreation use by the public is restricted on the Nellis Air Force Range. As detailed in the Management Guidance Common to All Alternatives section in Chapter 2 of this document, access restrictions imposed by the Air Force eliminate recreational opportunities in the planning area. Negotiations currently ongoing between the Air Force and the Nevada Department of Wildlife would open 26 square miles of the Stonewall Mountain area for bighorn sheep hunting; this possible hunting opportunity would provide the only recreational activity covered by this plan.

WILDERNESS

FLPMA (PL 94-579) requires that BLM conduct Inventories/Evaluations on public lands under its jurisdiction to determine roadless areas and islands which may have wilderness characteristics. As noted in the Management Guidance Common to All Alternatives section in Chapter 2 of this document, an evaluation of the Nellis Air Force Range was conducted in 1978 by BLM, in coordination with representatives of Sierra Club, Nevada Outdoor Recreation Association, University of Nevada-Reno Recreation Department, and Friends of Nevada Wilderness (U.S. DOI/USAF,1981:2-36). The lands encompassed by the Groom Mountain Range addition were inventoried during the Nevada Statewide Inventory, conducted in 1979. As a result of these evaluations, it was determined that the planning area did not contain any land that met the minimum criteria for consideration as a wilderness study area; therefore, no wilderness study areas have been recommended within the planning area.

Identified wilderness study areas within the Desert National Wildlife Range are under the sole jurisdiction and management of the USFWS (Public Land Order 4079); discussion of these lands and their management is beyond the scope of this document.

NATURAL AREAS

Ecologic or geologic features significant to the Nation's natural heritage are managed as Natural Hazard Areas (NHAs), Research Natural Areas (RNAs), and Outstanding Natural Areas (ONAs) for educational, research or recreational purposes. There are no designated natural areas in the planning area.

In May 1973, the Secretary of the Interior designated the Timber Mountain Caldera as a National Natural Landmark. A Natural Area categorization is usually assigned for National Natural Landmarks; however, the restrictions imposed by the military withdrawal of these lands precludes management for educational, research or recreational purposes.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

There are currently no Areas of Critical Environmental Concern within the planning area.

SOCIAL AND ECONOMIC CONDITIONS

Because of the manner in which data is organized and made available, the affected environment, for purposes of social and economic analysis, must necessarily be defined to include all of Clark, Lincoln, and Nye Counties. Analysis of potential effects must also be inferred from county-wide data.

Population and Area

Table 3-1 displays current population, decennial benchmarks, and population projections for the year 2000 for the three counties and the State. Clark County, with an estimated population of 659,830 in 1988, has 60.2 percent of the State's total population (1,095,880). With a land area of 5,173,760 acres, or 8,084 square miles, Clark County has a population density of slightly more than 81.6 persons per square mile. Clark County is, however, characterized by a highly developed urban area within the Las Vegas Valley, where the majority of the population resides. The balance of the county is sparsely populated and is similar in character to the other two counties evaluated in this study.

Lincoln and Nye Counties are rural and sparsely populated. Lincoln County covers a land area of 6,816,000 acres (10,650 square miles), with a population density of slightly more than 0.4 persons per square mile. The important residential areas are the city of Caliente and the towns of Alamo, Panaca, and Pioche.

Nye County, the largest in the state, has an area of 11,560,960 acres or 18,064 square miles. Population

density is about 0.9 persons per square mile, with residential centers in Gabbs, Tonopah, Beatty, Lathrop Wells, and Pahrump.

Income and Employment

Tables 3-2 and 3-3 show earnings and employment, by major industries, in 1986 for all three counties. The service industries are the single most important employers and income producers for the three counties, with Federal and State Government providing the second largest source of income for Clark and Lincoln Counties and the third most important source for Nye County. The high incidence of mining in Nye County makes mineral production that county's second most important source of jobs and earnings.

The predominance of service industries is explained primarily by gaming industry employment in Clark County. Civilian employment by private firms providing contractual services to the Nevada Test Site do, however, provide jobs and economic stability for Lincoln and Nye County residents.

Unemployment rates reported by county for November, 1987, were 6.1 percent for Clark, 5.7 percent for Lincoln, and 6.2 percent for Nye. The Nevada State average was 6.3 percent at that time. Rates reported for November, 1988 show significant improvement with 4.4 percent for Clark, 4.2 percent for Lincoln, 3.9 percent for Nye, and a Nevada State average of 4.4 percent.

Annual per capita income figures for 1986 show Clark ($14,898), Lincoln ($13,316) and Nye ($11,946) Counties to be below average for the State's 17 counties. Ranked 7th, 9th, and 15th, respectively, these figures compare to the Nevada State average of $15,445.

Social Setting, Attitude, and Values

An analysis of social attitudes, expectations, and lifestyles was conducted for the Final Environmental Statement, Proposed Public Land Withdrawal, Nellis Air Force Bombing Range (U.S.DOI,BLM/USAF,1981). Additional Social-Economic Profiles have been prepared by BLM and from these sources it may be concluded that the majority of both urban and rural residents are pleased with their communities and lifestyles. Rural residents are, however, less tolerant of outside influence in their lives.

Residents strongly value quality educational opportunities for their children, family life, friendship, personal honesty, and trust. In rural areas, personal independence, responsibility, and self-reliance are particularly prized virtues. Economic development, industrial growth, and community expansion are favored, while personal status and environmental concerns receive less emphasis.

Positive community attributes include such factors as (1) a good place to raise a family, (2) recreational opportunities, (3) and the quality of the physical environment. Air pollution and traffic congestion are perceived as negative influences by urban residents, while the lack of adequate hospital and medical care are the principle concerns of the rural area inhabitants.

The Federal Government represents a significant presence in these three counties, as illustrated by land ownership data. Almost 96 percent of the land area in Clark and Lincoln Counties (approximately 4,951,655 acres in Clark and 6,542,616 acres in Lincoln County) are under Federal ownership. Federal land ownership in Nye amounts to 8,560,733 acres, or almost 74 percent of the land within that county.

The Nellis Air Force Base and Range and the Nevada Test Site represent the most visible presence of Federal Government in the three counties. Local resident interest and concern is also directed toward Federal management of the lands for mining, livestock, grazing, wildlife and wild horse management, wilderness, land tenure and utility corridors.

Income and employment opportunities afforded by the military presence are generally perceived as favorable, even necessary. Concern about aircraft noise, sonic booms, range contamination from unexploded ordnance, radioactivity, seismicity, and potential range fires has been expressed by residents of the study area. A full discussion of these concerns may be found in the Final Environmental Statement for the Proposed Public Land Withdrawal, Nellis Air Force Bombing Range, Nye Clark, and Lincoln Counties, Nevada (U.S. DOI,BLM/USAF,1981).

Residents of Lincoln and Nye Counties, and the rural areas of Clark County, express strong interest in mining, livestock grazing, wild horse management and wilderness issues. Wildlife and land tenure, particularly lands available for community expansion and utility corridors have proven, in the past, to generate concern in both urban and rural areas throughout the counties.

TABLE 3-1

AFFECTED AREA POPULATION AND PROJECTIONS

LOCATION	1971	1980	% Change 1970-1980	1988 Estimate	2000 Projection
Clark County	273,288	463,087	69.5	659,830	1,069.430
Lincoln County	2,557	3,732	46.1	4,280	4,312
Nye County	5,599	9,048	61.6	16,170	28,439
State of Nevada	488,738	800,508	63.5	1,095,880	1,686,487

Source: 1970 and 1980 U.S. Department of Commerce, Bureau of the Census; 1988 Estimate, State of Nevada, Dept. of Taxation; 2000 Projection, State of Nevada, Office of Community Services, Nevada Statistical Abstract, 1988.

TABLE 3-2

CLARK, LINCOLN, AND NYE COUNTIES 1986 EARNINGS BY MAJOR INDUSTRIES ($1,000)

SECTOR	CLARK	LINCOLN	NYE	TOTAL	PERCENT
Agriculture	3,303	789	1,106	5,198	0.1
Mining	4,555	480	35,122	40,187	0.6
Construction	559,370	1,454	9,811	570,635	8.5
Manufacturing	204,615	109*	2,103	206,827	3.1
Transportation and Public Utilities	458,379	2,002	6,230*	466,611	7.0
Trade	911,972	1,991*	7,756	921,719	13.7
Finance, Insurance and Real Estate	325,860	381	3,166*	329,407	4.9
Services	2,866,487	33,857	245,873	3,145,417	46.9
Government	936,886	8,547	20,261	992,694	14.8
Federal, Civilian	158,878	920	4,968	164,766	
Military	189,790	60	757	190,607	
State and Local	615,218	7,567	14,536	637,321	
Other	24,777	22*	59	24,858	0.4
Total Earnings	6,323,204	49,632	303,687	6,703,523	100.0

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, April, 1988.

Earnings include wages and salaries, other labor income, and proprietor income. Earnings represent the principal component of total income which is further comprised of dividends, interest, rent, and transfer payments, less personal contributions for social insurance.

* BLM Estimate

TABLE 3-3

CLARK, LINCOLN, AND NYE COUNTIES
1986 EMPLOYMENT BY MAJOR INDUSTRIES

SECTOR	CLARK	LINCOLN	NYE	TOTAL	PERCENT
Agriculture	421	161	213	795	0.2
Mining	441	29	999	1,469	0.5
Construction	20,247	41	331	20,619	6.2
Manufacturing	8,689	8*	115	8,812	2.6
Transportation and Public Utilities	15,886	81	339*	16,306	4.9
Trade	60,041	226*	661	60,928	18.3
Finance, Insurance and Real Estate	23,790	47	212*	24,049	7.2
Services	145,619	1,121	7,389	154,129	46.3
Government	42,545	471	967	43,983	13.2
Federal, Civilian	5,891	41	163	6,096	
Military	10,910	11	65	10,986	
State and Local	25,744	418	739	26,901	
Other	2,131	3*	26	2,160	0.6
Total Earnings	319,810	2,188	11,252	333,250	100.0

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, April, 1988.

* BLM Estimates.

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This chapter analyzes the consequences of the alternatives discussed in Chapter 2, and is limited to BLM initiated or authorized actions; the impacts of withdrawing the lands for military uses were analyzed in the Final Environmental Impact Statement for the Proposed Public Land Withdrawal, Nellis Air Force Bombing Range, Nye, Clark, and Lincoln Counties, Nevada (1981) and the Final Environmental Impact Statement for the Groom Mountain Range, Lincoln County, Nevada (1986).

The scientific and analytic basis for comparison of the alternatives and selection of the preferred alternative is provided in this chapter. This resource plan is designed to be a comprehensive, long-range plan under which additional site-specific analysis and planning would take place before on-the- ground actions occur. The discussion of environmental consequences is in proportion to the significance of projected impacts. Both the beneficial and adverse impacts affecting the environmental components described in Chapter 3 have been analyzed. If impacts are not discussed, the analysis determined that impacts would not occur or would be insignificant. A summary of the impacts by alternative is presented in Table S-2.

This chapter includes the relationship between short-term use of the environment and the maintenance and enhancement of long-term productivity.

ASSUMPTIONS FOR ANALYSIS

The following assumptions are made for analytic purposes:

1. Funding and personnel will be sufficient to implement the selected resource management alternative.

2. The "long-term" for purposes of analysis in this document is 20 years; the "short-term" is 5 years.

3. Discussion of impacts is based on the best available data. Knowledge of the area and professional judgement, based on observation and analysis of conditions and responses in similar areas, have been used to infer environmental impacts where data is limited.

4. Numbers given are approximate projections-the reader should not infer that they reflect precise "to the last acre" estimates.

5. Site-specific environmental assessments (EAs) will be completed for specific projects and proposals prior to implementation.

6. Unless otherwise noted, impacts are considered to be negative.

7. Unless otherwise noted, impacts are not considered significant.

IMPACTS OF MANAGEMENT GUIDANCE COMMON TO ALL ALTERNATIVES

This section analyzes the impacts resulting from Management Guidance Common to All Alternatives; these impacts are likely to occur no matter which of the alternatives is ultimately selected.

LANDS

Management actions proposed in this section or in any of the alternatives would not significantly impact land uses. Valid existing rights would continue to be recognized; maintenance of these rights-of-way could result in up to 50 acres being disturbed. Short-term impacts would include loss of vegetation due to grading and clearing, pole replacement, road reconstruction, and line replacement. These impacts would be mitigated by limiting disturbances to the minimum acreage needed to accomplish the task, stockpiling topsoil for reclamation, recontouring, and, where annual precipitation exceeds 8 inches, reseeding with native species.

Future land uses could impact up to an additional 110 acres, as a result of right-of-way construction activities. Vegetation would be removed, soils compacted, drainages altered, wildlife habitat destroyed or altered, and wildlife species either displaced or killed. These impacts would be partially mitigated by limiting the disturbance to the minimum necessary to accomplish the task. Other mitigating

measures could include stockpiling soils for reclamation, recontouring, and, where the annual precipitation exceeds 8 inches, reseeding with native species.

Inventories for cultural resources and threatened and endangered species would be conducted prior to the authorization of any surface disturbing activities. Protection and mitigation measures, as needed, would be developed through the appropriate legal processes (Section 106 of the National Historic Preservation Act and Section 7 of the Endangered Species Act, respectively). Site-specific environmental assessments (EAs) would be developed prior to authorizing any land use.

ACCESS

Access would not be significantly impacted by any of the actions proposed in this plan. Legal access is adequate for the management of the Nevada Wild Horse Range and the Bald Mountain allotment.

MINERALS

Withdrawal of the Nellis Air Force Range from all forms of mineral entry has precluded all mineral activities except those attached to valid existing rights. BLM has determined, with Air Force concurrence, that no areas within the Nellis Air Force Range are suitable for opening to operation of the Mining Law of 1872, the Mineral Lands Leasing Act of 1920 as amended, the Minerals Leasing Act for Acquired Lands of 1947, and the Geothermal Steam Act of 1970. The Air Force has indicated that mineral activities are not compatible with the military mission on the Nellis Air Force Range and that no areas would be suitable for opening. Such use would 1) interfere with the primary use of these lands for military purposes, 2) present unacceptable health, safety, and welfare concerns for the public, and 3) not conform with national security needs. The Air Force and other organizations use the Nellis Air Force Range for conducting weapons systems testing, training for electronic warfare, tactical maneuvering, and air support, including air-to-ground and targeting activities, and nuclear testing. Many national defense programs are conducted on or over the Nellis Air Force Range; mineral exploration and development would seriously compromise the security of these programs. With the exception of claims in the Groom Mountain Range addition, the Air Force has compensated owners of valid patented or unpatented claims on the Nellis Range by securing leases for valid claims or purchasing claims at fair market value.

In accordance with PL 99-606, BLM, with the concurrence of the Air Force, will determine in November, 1991 and every 5 years thereafter, which, if any, of the withdrawn public lands can be considered for opening under the operation of the Mining Law of 1872, the Mineral Lands Leasing Act of 1920 as amended, the Minerals Leasing Act for Acquired Lands of 1947, the Geothermal Steam Act of 1970, or any one or more the these Acts.

Implementation of any of the resource management actions proposed in this plan would not significantly affect existing mineral activities. Valid existing rights would continue to be recognized on the 25 unpatented claims and two oil and gas leases within the planning area; full development would result in 516 acres and 600 acres, respectively, being impacted. Vegetation would be removed, soils compacted, wildlife habitat destroyed, wildlife species displaced or killed, and drainage patterns altered. Air quality would decrease and potentially hazardous substances would be introduced to the area, thus endangering both surface and ground water.

Inventories for cultural resources and threatened and endangered species would be conducted, as required, prior to the authorization of any surface disturbing activities. Protection and mitigation measures would be developed through the appropriate legal processes (Section 106 of the National Historic Preservation Act and Section 7 of the Endangered Species Act, respectively). Site-specific EAs would be prepared to address the impacts of full development for any, or all, of the valid existing rights, and mitigation would be proposed.

An additional description of environmental impacts in relation to the military activities and their impact to the mineral resources are discussed in the Final Environmental Impact Statement for the Proposed Public Land Withdrawal, Nellis Air Force Range, Nye, Clark, and Lincoln Counties, Nevada (1981) and in the Final Environmental Impact Statement for the Groom Mountain Range, Lincoln County, Nevada (1986). (See Appendix H for copies of specific text from both of these documents.)

SOIL, WATER, AND AIR RESOURCES

Implementation of the management actions proposed in this plan would have both positive and negative impacts on soil, water, and air resources in the planning area. Many uses which would result in long-

term impacts to soil, water, and air resources have been precluded by the restrictive nature of the withdrawal legislation.

Full development, as described above, of the 25 unpatented mining claims and two oil and gas leases would impact 516 acres and 600 acres respectively. Vegetative cover would be removed, thereby increasing erosion potential. Soils would be stripped away in some locales and severely compacted in other areas. Drainages would be altered and water resources would be developed utilizing both ground and surface waters, if available. The quantity of water needed would be dependent on the method of processing (for mining) and the extent of operations (for oil and gas). Water quality could potentially decrease due to the presence of the hazardous substances associated with mining and oil and gas production. Air quality would be degraded during operation as a result of increased vehicular emissions, industrial by-products, and fugitive dust.

Maintenance of existing rights-of-way could impact up to 50 acres; construction of new rights-of-way could affect an additional 110 acres. Erosion potential would increase due to the loss of vegetation cover. Soil compaction would occur wherever vehicular use was concentrated, i.e. on access roads and at tower or pole pads. Impacts to water resources would be minimal. Air quality would be degraded as a result of increased vehicular emissions and fugitive dust.

Actions implemented under any of the alternatives discussed in this plan would likewise have minimal negative impacts on soil, water, and air resources. In all probability, these actions would positively impact the identified resources by improving management. Fencing proposed in any of the alternatives would sustain a short-term negative impact related to vegetation loss and the subsequent increase in erosion potential. Minimizing the disturbed area by utilizing best available construction techniques and mitigating the disturbance through soil stabilization and revegetation would reduce or eliminate long-term impacts. Management actions to control the wild horse population and protect riparian vegetation would confer both short and long-term benefits to soil and water resources. Impacts to air quality would result from the increased vehicular emissions and fugitive dust caused by traffic and construction; these impacts would be short-term and conditions would rapidly return to normal when construction activities cease.

VEGETATION

Impacts to vegetation would result from land uses, minerals actions, wild horses, livestock grazing, and fire management activities proposed in the Management Guidance Common to All Alternatives. The impacts specific to each alternative are discussed in detail later in this chapter.

Impacts to vegetation would result from new construction and the maintenance and reconstruction of existing rights-of-way. Approximately 50 acres of vegetation would be removed by maintenance and reconstruction activities, allowing invader species (those species which become established in an ecosystem in response to surface disturbances) to degrade the ecological condition. An additional 110 acres could be disturbed by new rights-of-way construction, with the removal of vegetation and the introduction of invader and exotic species negatively impacting the ecological condition.

Minerals actions could impact up to 516 acres on mining claims and up to 600 acres on oil and gas developments. Full scale development would result in the total loss of vegetation on the claims and leases. Without supplemental irrigation, revegetation to pre-disturbance conditions is virtually impossible in those portions of the planning area that receive less than 8 inches of precipitation annually . Mitigation would include limiting surface disturbances to the minimum required to accomplish mineral development and stockpiling soils for reclamation. Other mitigating measures would salvage vegetation at an on- site nursery for future transplanting and reseed with native species in areas receiving at least 8 inches of annual precipitation.

Impacts to special status species would be minimal. The State of Nevada Critically Endangered plant, Astragalus beatleyae, is not known to occur within the Bald Mountain allotment or the Nevada Wild Horse Range. Wild horses are not expected to utilize any Astragalus species, except under extreme circumstances. Prior to authorizing any surface disturbing activities, site evaluations would be conducted to determine if special status plants are present. Protection and mitigation measures, as required, would be developed through Section 7 of the Endangered Species Act.

Wild horse use of the planning area would continue to impact vegetation. Heavy to severe grazing (60-100

percent use on the current year's growth) would occur within a one-quarter mile radius of water sources, and moderate to heavy grazing would extend out to a 4.5 mile radius. The vigor and reproduction (seed production, germination, and establishment) of the existing plant communities within this area are decreasing and invader species and increaser species (those species which increase in numbers as a result of selective grazing pressure) are becoming established. Ecological condition would continue to deteriorate toward an early seral stage at the six developed springs and along Breen Creek. All undeveloped water sources would be similarly impacted.

Implementation of livestock grazing decisions identified in this plan will result in both positive and negative impacts to vegetation. Changes in ecological condition would continue to occur within a one-quarter mile radius of the livestock water sources on the Bald Mountain grazing allotment. Livestock tend to congregate at the seven developed and three undeveloped sources for long time periods and eliminate the perennial forbs and grasses. Perennial shrubs at these locations are either grazed or trampled. Invader species and increaser species would become established around these water sources, thus lowering the ecological condition of the site. Mitigation would consist of developing and maintaining adequate numbers of livestock waters, based on stocking rates.

Construction of range improvements would have a short-term negative impact on vegetation, as a result of construction-related damage or loss. This short-term impact would eventually be offset by the long-term positive effects derived from improved manageability.

Fire suppression activities would result in impacts to vegetation due to fire line construction and access needs. Revegetation by natural means or reseeding would restore productivity in the long-term. Impacts to vegetation resulting from the fire itself could be either positive or negative, depending on the intensity of the burn. Relatively "cool" fires remove the plant litter and above-ground biomass, but do not harm the roots; increased sprouting and vigor result in subsequent years. "Hot" fires kill the root systems and remove above- ground biomass. Invader species could then become established, thereby lowering the ecological condition to an early seral stage.

FORESTRY

Access restrictions imposed by the Air Force have precluded timber management activities in the planning area. Implementation of any of the actions proposed in this resource plan would not, therefore, have any impact on timber management.

WILDLIFE HABITAT

Impacts to wildlife habitat would result from land uses, minerals activities, wild horses, livestock grazing, and fire management actions proposed in the Management Guidance Common to All Alternatives. Impacts to wildlife habitat specific to each alternative are discussed in detail later in this chapter.

Maintenance of the existing rights-of-way would affect 50 acres of wildlife habitat, while construction of new rights-of-way would result in the loss of an additional 110 acres of habitat. Increased human activity would generate indirect impacts that could produce such stress-related effects as decreases in reproduction and recruitment, susceptibility to disease, and abandonment of the area.

Mineral exploration and development activities in the planning area would be limited to the 25 existing unpatented mining claims and 2 existing oil and gas leases. Full development would eliminate up to 516 acres and 600 acres, respectively, of wildlife habitat; indirect impacts due to increased human activity would affect an additional 1,788 acres and 1,880 acres, respectively. These indirect impacts could cause stress in wildlife populations, resulting in reduced reproduction and recruitment, susceptibility to disease, and possible abandonment of the area. Stress-related impacts generally cease when the human presence is eliminated.

No impacts on predator control activities within the planning area (or on adjacent public or private lands) would result from the Management Guidance Common to All Alternatives or any of the alternatives in this plan. Predator control would be initiated on a case-by-case basis and would probably be in response to requests from the livestock operator on the Bald Mountain allotment. Additional requests could be initiated by livestock operators on adjacent public and private lands.

Impacts to wildlife habitat would result from wild horse use of the planning area. These impacts would be most noticeable in the vicinity of water sources, where monitoring has shown that heavy-to-severe grazing occurs within one- quarter mile of the source. Perennial grasses and forbs would decrease, invader and increaser species would become established, species diversity would decline, and overall ecological condition would be lowered. Appropriate wild horse population levels and adequate numbers and distribution of waters would lessen the negative impacts.

Properly managed livestock grazing would result in minor impacts to wildlife habitat. Negative impacts to wildlife habitat would occur in the vicinity of water sources as animals compete for space and water; congregating livestock would degrade the habitat within a one-quarter mile radius of water sources by eliminating perennial forbs and grasses and by trampling perennial shrubs. Appropriate stocking rates and adequate distribution of waters will minimize these impacts.

Fire suppression activities, including fire line construction and access needs, will result in short-term impacts to wildlife habitat. Revegetation by natural or mechanical means will restore productivity in the long-term.

WILD HORSES

None of the actions proposed under Management Guidance Common to All Alternatives will significantly affect wild horses. Impacts associated with specific alternatives will be discussed in detail later in this chapter.

LIVESTOCK GRAZING

Livestock grazing would continue on the Bald Mountain allotment at the same level of use as occurred at the time of withdrawal. Livestock grazing would not be significantly affected by any of the actions proposed in this resource plan.

CULTURAL RESOURCES

Under Management Guidance Common to All Alternatives, BLM actions and activities will continue to be conducted in accordance with all applicable laws, regulations, and guidelines to protect and preserve cultural resources.

Federal regulations require cultural resource inventory and mitigation of impacts to significant sites, prior to the authorization and initiation of land uses with associated surface disturbing activities. Each proposed land use authorized under this plan will be investigated on a case-by-case basis to minimize impacts. If significant cultural resources are identified during inventory, site avoidance or mitigation, as mandated by the National Historic Preservation Act (NHPA) Section 106 consultation process, will be completed prior to project authorization.

Minerals actions that disturb the surface on less than 5 acres of land in a calendar year are not subject to the Federal regulations that mandate cultural resource inventory and site mitigation prior to initiation of the activities. Should development occur on the 25 unpatented claims located within the planning area, a total of 516 acres could be disturbed over the life of the resource plan, with the potential loss of unidentified cultural resources. Surface disturbing activities associated with minerals exploration and development in excess of 5 acres within a calendar year would be subject to cultural resource inventory and, if necessary, site avoidance or mitigation through Section 106 consultation, prior to the initiation of these actions. Development of the existing oil and gas leases would also require cultural resource inventory and, if necessary, site avoidance or mitigation through Section 106 consultation.

Livestock and wild horse grazing would not negatively impact cultural resources except in those areas where animals congregate, thereby increasing the potential for damage to sites from trampling. This damage would occur primarily in the vicinity of spring sources.

Fire suppression would result in positive and negative impacts to cultural resources. The suppression of fire would benefit certain cultural resources, especially historical mining camps, ranches and other wooden structures, by directly protecting them from damage or destruction. Negative impacts could be sustained to unidentified cultural resources during the construction of fire lines and access routes.

VISUAL RESOURCES

Visual resources in Class III and Class IV areas would be minimally impacted by the management actions proposed in this resource plan.

Construction and maintenance on seven existing and six future rights-of-way would disturb up to 160 acres. Oil and gas exploration and development could impact up to 600 acres, while full development on the 25 unpatented mining claims could impact up to 516 acres. Vegetation would be removed and soils

disturbed, thereby causing contrasts in the color, form, and texture of the landscape. Mitigation measures would be developed in site-specific EAs and would include limiting the disturbance to the minimum necessary to accomplish the task. Other measures would involve relocating projects to less conspicuous sites, recontouring the area, and reseeding with native species at those locations where annual precipitation exceeds 8 inches. All mitigation measures would comply with BLM's Visual Resource Management Class guidelines.

RECREATION

Should negotiations currently underway between the Air Force and the Nevada Department of Wildlife conclude in the opening of a 26 square mile area on Stonewall Mountain for limited access bighorn sheep hunting, a beneficial impact to recreation would be realized. Access restrictions, imposed by the Air Force for safety and security reasons, have precluded all other forms of recreation on the planning area; therefore, this document does not propose any uses which would impact recreation.

WILDERNESS

No impacts to wilderness are anticipated. The Nellis Air Force Range does not contain any lands that meet the minimum criteria for wilderness study areas. Uses proposed under Management Guidance Common to All Alternative or under any of the alternatives would not negatively impact any wilderness study areas located within the Desert National Wildlife Range or adjacent public lands.

NATURAL AREAS

No management actions are proposed within the boundaries of the Timber Mountain Caldera National Natural Landmark; therefore, no impacts to Natural Areas are anticipated.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

No impacts to proposed ACECs are predicted to result from Management Guidance Common To All Alternatives. Impacts specific to proposed alternatives are discussed under the appropriate alternative.

FIRE MANAGEMENT

Fire management activities on the Nellis Air Force Range would not be affected by Management Guidance Common to All Alternatives or any of the alternatives discussed within this resource plan. BLM suppression of non-military caused fires is mandated by PL 99-606 and is covered under an existing MOU.

SOCIAL AND ECONOMIC CONDITIONS

No significant social or economic impacts, either beneficial or adverse, are anticipated to occur as a result of any of the actions proposed under Management Guidance Common to All Alternatives or any of the other alternatives discussed in this resource plan. No new types of uses or changes in levels of use are to be implemented in those resource activities from which social and economic benefits can be expected to be derived. All valid existing mineral rights will continue to be recognized. Recreation activities will remain precluded by access restrictions. Livestock grazing will continue in those areas where it was authorized at the time of the withdrawal.

UNAVOIDABLE ADVERSE IMPACTS

The management actions would result in a minimum of unavoidable impacts. Maintenance of existing rights-of-way could result in unavoidable adverse impacts to vegetation and wildlife habitat (up to 50 acres).

Mining activities on the 25 unpatented claims could disturb a maximum of 516 acres. Although some impacts could be mitigated or compensated, mining actions conducted under the Mining Law of 1872 are a statutory right and non- discretionary.

Oil and gas activities could impact up to 600 acres. Impacts to vegetation, soils, air quality, and wildlife habitat would result from construction of drill pads, tram roads, pipelines, tank batteries, and other required facilities.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Full development of the existing mineral rights (25 unpatented claims and two oil and gas leases) would result in the permanent loss of the extracted minerals, oil and gas.

RELATIONSHIP BETWEEN SHORT-TERM USE AND LONG-TERM PRODUCTIVITY

Short-term uses in lands and minerals would result in a long-term loss of productivity on 2,276 acres due the placement of facilities, the loss of soil and vegetation, and the difficulties inherent in reclaiming severely disturbed lands in arid and semi-arid environments.

All other management actions would not affect long-term productivity.

CUMULATIVE IMPACTS

Cumulative impacts result from the incremental impact(s) of the action, in conjunction with past, present, and reasonably foreseeable future uses.

The planning area has been withdrawn for military purposes for over 40 years; according to the EIS prepared for the withdrawal of the Nellis Air Force Range, approximately 12,000 acres (0.41 percent of the planning area) have been directly impacted by military activities (U.S. DOI/USAF,1981:ii). Military uses on the planning area are described in detail in the Final Environmental Impact Statement for the Proposed Public Land Withdrawal, Nellis Air Force Bombing Range, Nye, Clark, and Lincoln Counties, Nevada (1981).

Non-military uses during this time period included a limited amount of livestock grazing and mineral exploration and development; these uses have had little or no impact on the environment in the last 15 years.

Current non-military uses include private land uses (123 acres of patented mining claims) and BLM initiated or authorized actions (wild horse and burro management, livestock grazing, 25 unpatented mining claims and 6 rights-of-way). Private lands (patented mining claims) located within the boundaries of the planning area total 123 acres (0.006 percent of the acreage of the planning area) and are concentrated on the west slopes of the Groom Mountain Range. Although this plan does not address the management or use of private lands, these lands and their uses must be considered when evaluating cumulative impacts.

Under Management Guidance Common to All Alternatives, the actions initiated or authorized by BLM would directly affect 1.7 percent (38,451 acres) of the planning area; indirect impacts will affect an additional 0.17 percent (3668 acres) of this area. These actions are primarily related to maintenance of existing rights-of-way, exercising valid existing rights on the 25 unpatented mining claims and 2 oil and gas leases, and livestock grazing on the Bald Mountain allotment.

Reasonably foreseeable future uses could occur in all of the above categories. Military uses are expected to impact 7,600 acres (0.34 percent of the planning area) during the 15 year life of the current withdrawal, which expires on November 6, 2001 (U.S. DOI/USAF, 1981:ii).

All of the 123 acres of private land could potentially be impacted by landowner activities.

BLM authorized or initiated activities would be related to the continuation of livestock grazing on the Bald Mountain allotment, the granting of new rights-of- way (with the concurrence of the Air Force), and authorization of activities on the unpatented mining claims and the oil and gas leases. No expansion of grazing would occur and no new mining claims or oil and gas leases would be allowed on the planning area.

Based on the above data, a total of 58,174 acres (2.6 percent) of the Nellis Air Force Range would be directly impacted and 3,668 acres (0.17 percent) would be indirectly impacted. The acreage and percentages, and the number and intensity of impacts, would represent an insignificant cumulative impact to the human environment of the 2,209,326 acre planning area.

IMPACTS OF ALTERNATIVE A–NO ACTION

This alternative represents the continuation of current management direction within the framework of present laws and regulations, including existing Memoranda of Understanding and Cooperative Agreements. The impacts discussed below are in addition to those identified in Management Guidance Common to All Alternatives.

VEGETATION

Alternative A would perpetuate the existing situation on the planning area. Wild horse numbers, which currently exceed the appropriate management level by 150 percent, would continue to degrade the vegetative resource, particularly in the vicinity of water sources. Perennial grasses and forbs within one-quarter mile of water sources would continue to be severely grazed; from one-quarter mile to 4.5 miles away from these sources, heavy grazing of perennial grasses and forbs would occur. Vegetation that is not grazed would be trampled and the soils compacted, thus preventing the re-establishment of vegetation. Ecological condition would be lowered to an early or mid seral stage, depending on the distance from the water source. Six developed and fourteen undeveloped spring sources (814,300 acres-37 percent of the planning area) are anticipated to be thus impacted.

Approximately 250 acres of riparian vegetation at perennial springs and along Breen Creek, the only perennial stream in the planning area, would continue to be eliminated in those locations where wild horses can gain access to these water sources.

Overgrazing by approximately 5,000 wild horses would cause ecological conditions to deteriorate throughout the wild horse areas on the planning area. Approximately 44 percent (969,550 acres) of the planning area would continue to receive heavy grazing on perennial grasses and forbs. Progressive deterioration of the ecological condition would occur, as the perennials die-out and are replaced by invader and increaser species.

The impacts from livestock grazing are discussed under Management Guidance Common to All Alternatives in this chapter.

WILDLIFE HABITAT

Impacts to wildlife habitat and competition with wild horses would continue to occur, primarily on the 394,000 acre Nevada Wild Horse Range. However, since the Nevada Wild Horse Range would remain unfenced, wild horse-related impacts could extend to an additional 1,390,000 acres (63 percent of the planning area). The extent and severity of impacts would increase, as the growing numbers of wild horses expand their range in search of water and forage. The wild horse population is currently 150 percent in excess of the appropriate management level; impacts would thus occur throughout the 1,784,000 acres of wild horse use areas on the Nellis Air Force Range.

Wild horse-related impacts to wildlife habitat would be most noticeable in the vicinity of water sources. Perennial grasses and forbs within one-quarter mile of water sources would continue to be severely grazed; from one-quarter mile to 4.5 miles away from these waters, heavy grazing of perennial grasses and forbs would occur. Vegetation that is not grazed would be trampled and the soils compacted, thus preventing the re-establishment of these species. Ecological condition would be lowered to an early or mid seral stage, depending on the distance from the water source. Six developed and fourteen undeveloped spring sources (814,300 acres-37 percent of the planning area) are anticipated to be thus impacted.

Approximately 250 acres of riparian habitat at perennial springs and along Breen Creek would continue to be degraded. This habitat type supports a greater diversity of wildlife than any other on the planning area; the continuing loss of this habitat negatively impacts the composition and numbers of the wildlife populations on the Nellis Air Force Range.

These impacts to wildlife habitat would result in increasing competition between wildlife and wild horses for water, forage, and cover. Many species of wildlife would avoid those water sources that are being heavily utilized by wild horses. Stress-related impacts, such as reduced vigor, increased susceptibility to disease and predation, reduced reproductive rates and lowered survival rates of offspring, would occur as these species search for alternate water sources.

WILD HORSES

Wild horses would continue to be impacted by current management actions on the planning area. Water developments at six springs on the Nevada Wild Horse Range would provide reliable, year-round sources. An additional 14 springs could be developed under the existing HMAP.

The Nevada Wild Horse Range (394,000 acres) would remain unfenced. Wild horses could continue to move off the designated horse range, utilizing other areas within the Nellis Air Force Range. With wild horse numbers currently 3000 head in excess of the appropriate management level, it is projected that an additional 1,390,000 acres (63 percent) of the planning area would continue to be utilized by wild horse herds.

Permanent waters would be developed and maintained only on the Nevada Wild Horse Range. Horse use outside of the NWHR would be dependent on ephemeral water sources, created by seasonal run-off, or on natural, undeveloped springs. Whenever these temporary water sources were unavailable to horses, overuse of the permanent water sources would occur. Negative impacts such as intra- specific competition for water and cover, habitat degradation in the vicinity of water sources, and other stresses would affect the wild horse population.

Under Alternative A-No Action, no permanent water sources would be developed outside the Nevada Wild Horse Range. As wild horses expand their range in search of water and forage, they would come to be more dependent of temporary water sources. These temporary sources would include natural ephemeral springs or catchments and seasonal run-off that collects in bomb craters, borrow areas, and man-made ponds for military use. During years of high precipitation, temporary water sources would support

existing wild horse herds and allow populations to increase. In times of drought, these temporary sources would dry up, potentially causing die-offs among the wild horses.

As wild horses expand their territory, exposure to hazards not normally found on the Nevada Wild Horse Range would increase. Vehicular traffic-related accidents along the main access road to Tonopah Test Range kill or injure an estimated 50 horses annually. Contacts with potentially hazardous or lethal substances could become more common-place; in 1988, 61 wild horses died after drinking contaminated water on the Tonopah Test Range.

Wild horse management intensity and effectiveness would be diminished in the areas of horse use outside of the Nevada Wild Horse Range. Accurate censuses over such large acreage would be difficult to conduct; maintaining proper wild horse numbers would be hampered by the lack of accurate censuses. Successful gatherings would be less likely to occur due to the extensive area to be covered. Failure to achieve the appropriate management level would result in the continued expansion of the wild horse population.

UNAVOIDABLE ADVERSE IMPACTS

Under Alternative A-No Action, ecological condition would be lowered to an early seral stage within a one-quarter mile radius of all water sources utilized by wild horses and livestock. Ecological condition would also be lowered throughout the area utilized by wild horses, if current population levels are maintained or increased.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Alternative A-No Action Alternative does not make any irreversible or irretrievable commitments of resources, other than those identified under Management Guidance Common to All Alternatives.

RELATIONSHIP BETWEEN SHORT-TERM USE AND LONG-TERM PRODUCTIVITY

If wild horse numbers are allowed to continue to exceed the appropriate management level by 150 percent or more, long-term productivity on 81 percent (1,784,000 acres) of the planning area would be sacrificed due to overgrazing.

CUMULATIVE IMPACTS

The cumulative impacts identified under Management Guidance Common to All Alternatives in this chapter would persist under Alternative A-No Action; impacts specific to Alternative A would, however, increase the cumulative impacts.

Present uses identified in Alternative A-No Action relate primarily to the presence of wild horses and burros on the planning area. Alternative A-No Action would affect 18 percent (394,000 acres) of the planning area by continuing to manage the Nevada Wild Horse Range for wild horses. An additional 63 percent (1,390,000 acres) would continue to be impacted by wild horses as they expand their range in search of water and forage. Wild horse numbers are estimated at 5,000 head, 150 percent in excess of the appropriate management level; the resulting overuse of available forage continues to degrade the ecological condition on 81 percent (1,784,000 acres) of the planning area.

When combined with the 58,174 acres identified to be directly affected by management actions discussed under Management Guidance Common to All Alternatives, the No-Action alternative would cumulatively impact 83.38 percent of the planning area. Indirect impacts would occur on an additional 0.17 percent of the area. The type and severity of impacts would vary from relatively minor impacts associated with livestock grazing (37,175 acres), moderate to heavy impacts related to wild horse grazing (1,784,000 acres) to severe impacts resulting from mineral development and rights-of-way construction and maintenance (1399 acres).

Foreseeable future uses would also be directly related to the wild horse and burro use of the planning area. If current trends are allowed to continue, wild horse and burro numbers would increase until starvation, disease, or some combination of the two forces, curbed population growth. Until that time, the ecological condition on the planning area would progressively decline as a result of overgrazing. Wildlife habitat would degrade, with many wildlife species being forced to emigrate from the area in search of forage and water. Wild horses would continue to expand their range beyond the 1971 use areas, potentially impacting public and private lands adjacent to the planning area. Conflicts between military uses and wild horses would increase,

endangering both humans and wild horses. Burros would also continue to expand their range.

It is also foreseeable that effective control of the wild horse populations could occur under the terms and conditions of the existing HMAP, given adequate funding and management commitment. Wild horse numbers could be reduced to 2,000 head and burros could be eliminated from the planning area. This would effectively negate the impacts outlined in the previous paragraphs and reduce the cumulative impacts to a level of insignificance.

Impacts resulting from military uses and private land uses, while potentially significant at the individual level, are not cumulatively significant and have little effect on the overall cumulative impacts that would result from the implementation of this plan.

The cumulative impacts of Alternative A-No Action are, therefore, dependent on the types of future use which occur. Under one scenario, the existing situation would continue, resulting in a significant cumulative impact due to the vast acreage involved and the degradation to the environment caused by excessive numbers of wild horses and burros. The second possible scenario would implement the existing management framework included in the HMAP and significantly reduce cumulative impacts.

IMPACTS OF ALTERNATIVE B– PREFERRED ALTERNATIVE

This alternative is designed to protect natural resources and to improve resource conditions, within the constraints imposed by the military use of the withdrawn land.

VEGETATION

A reduction of wild horse numbers to the new appropriate management level would relieve grazing pressure on the Nevada Wild Horse Range, thus allowing vegetation on 394,000 acres to recover from past overuse.

The removal of all wild horses from areas outside the Nevada Wild Horse Range would eliminate grazing pressure on 1,390,000 acres. Invader and increaser species would decline in abundance, perennial grasses and forbs would increase, and ecological condition would improve, eventually reaching a late seral stage.

A limited number of wild horses would be expected to stray off the Nevada Wild Horse Range over time in response to changing forage conditions and water availability; these problem animals would be removed on an as-needed basis and would have little or no impact outside of the Nevada Wild Horse Range.

The development and maintenance of an additional 14 water sources on the Nevada Wild Horse Range would improve the distribution of wild horses; grazing pressure would be reduced at the existing water sources and ecological condition would improve. Wild horse movements could be controlled through the manipulation of water availability; waters in specific areas could be turned on or off to draw animals into an area or discourage use in an area.

The development and maintenance of an additional six water sources on the Bald Mountain allotment would improve the distribution of livestock; grazing pressure would be reduced at the existing water sources and ecological condition would improve. Livestock movements could be controlled through the manipulation of water availability; waters in specific areas could be turned on or off to draw animals into an area or discourage use in an area.

If required, the construction of up to 30 miles of boundary fence on the Bald Mountain grazing allotment would prevent livestock from drifting off the allotment and eliminate grazing pressure on 52,425 acres. Ecological condition would improve, eventually reaching a late seral stage, as invader and increaser species decline in abundance and perennial grasses and forbs re-establish. Fence construction would result in 53 acres of disturbance where vegetation would be compressed and, in some cases, individual plants destroyed. Natural revegetation would occur in the long-term.

If necessary, the construction of up to 50 miles of fence to protect riparian vegetation from wild horse and livestock grazing would have a short-term negative impact on vegetation. Fence construction would damage vegetation on 91 acres by compressing the above-ground biomass; some individual plants would be destroyed. Natural revegetation of the area would occur in the long-term. Up to 250 acres of riparian vegetation (150 acres at Breen Creek and 100 acres at various spring sites) and 3,600 acres of non-riparian vegetation would be protected from wild horse and livestock grazing. Plant species associated with disturbed or degraded

riparian areas, such as rabbit-bush and yerba santa, would be replaced over time by a more diverse community representative of climax riparian vegetation; box elder, willows, cottonwood, ash, sedges, rushes, and grasses would become re-established.

If required, construction of 125 miles of boundary fence on the Nevada Wild Horse Range would result in a short-term negative impact on 227 acres of vegetation. Above-ground biomass would be removed and compressed by construction activities; some individual plants would be destroyed. Natural revegetation would occur in the long-term.

If necessary, construction of 75 miles of boundary fence on the Nellis Air Force Range would result in a short-term negative impact on 136 acres of vegetation. Above-ground biomass would be removed and compressed by construction activities; some individual plants would be destroyed. Natural revegetation would occur in the long-term.

WILDLIFE HABITAT

A reduction in wild horse numbers to the new appropriate management level would relieve grazing pressure on the Nevada Wild Horse Range, thus allowing wildlife habitat on 394,000 acres to improve in ecological condition.

The removal of all wild horses from areas outside the Nevada Wild Horse Range would eliminate grazing pressure on 1,390,000 acres of wildlife habitat. Invader and increaser plant species would decline in abundance, perennial grasses and forbs would increase, and ecological condition would improve, eventually reaching a late seral stage. The diversity of wildlife would increase and new niches would be created; new wildlife species would migrate into the area to occupy these niches. Competition with wild horses for water, forage, and cover would be eliminated on 1,390,000 acres.

Over time, a limited number of wild horses would be expected to stray off the Nevada Wild Horse Range in response to changing forage conditions and water availability; these problem animals would be removed on an as-needed basis and would have little or no impact outside of the Nevada Wild Horse Range.

Providing permanent water for wildlife at up to 20 water sources on the Nevada Wild Horse Range and the Bald Mountain allotment would reduce competition with wild horses and livestock for limited supplies of water.

If determined necessary by monitoring, the construction of up to 30 miles of boundary fence on the Bald Mountain grazing allotment would prevent livestock from drifting off the allotment and eliminate grazing pressure on 52,425 acres. Ecological condition would improve, eventually reaching a late seral stage, as invader and increaser plant species decline in abundance and perennial grasses and forbs re-establish. Competition with livestock for forage, water, and cover on 52,425 acres would be eliminated. New wildlife species would migrate into the area to fill the niches created by this elimination of livestock grazing pressure. Fence construction would result in 53 acres of disturbance, as vegetation is compressed and, in some cases, individual plants destroyed. Natural revegetation would occur in the long-term.

If necessary, construction of up to 50 miles of fence to protect riparian habitat from wild horse and livestock grazing would have a short-term negative impact on vegetation. Fence construction would damage habitat on 91 acres by compressing the above-ground biomass and destroying some individual plants.

Natural revegetation of the area would occur in the long-term. Up to 250 acres of riparian habitat (150 acres at Breen Creek and 100 acres at 20 spring sites) and 3,600 acres of non-riparian habitat would be protected from wild horse and livestock grazing. Plant species associated with disturbed or degraded riparian areas, such as rabbitbrush and yerba santa, would be replaced over time by a more diverse community representative of climax riparian habitat; box elder, willows, cottonwood, ash, sedges, rushes, and grasses would become re- established. The diversity of wildlife habitat would increase, and new niches would become available; a broad spectrum of wildlife would migrate into the area to occupy the newly created niches.

If necessary, construction of 125 miles of boundary fence on the Nevada Wild Horse Range would result in a short-term negative impact on 227 acres of wildlife habitat. Above-ground biomass would be removed and compressed by construction activities; some individual plants would be destroyed. Natural revegetation would occur in the long-term.

WILD HORSES

Approximately 4,000 wild horses would be removed from the planning area. Wild horse use would thus be eliminated on approximately 1,390,000 acres. Two horse use areas would be entirely eliminated, as

would a portion of a third use area. Wild horses would no longer be exposed to vehicular traffic and potentially hazardous substances on the Tonopah Test Range; a minimum of 50 wild horses per year would be saved from accidental injuries and death. Potential expansion of wild horses to public and private lands adjacent to the planning area would be eliminated.

The restriction of wild horses to the Nevada Wild Horse Range would require an initial reduction in the appropriate management level (AML) from 2000 head to 1000 head in order to prevent overuse of available water and forage. The higher figure was predicated on the ability of wild horses to move off the Nevada Wild Horse Range in response to decreased forage and water availability. Future adjustments to the AML would be based on monitoring.

Improved management would result from the restriction of wild horses to the Nevada Wild Horse Range. Accurate censuses would be easier to obtain on this restricted acreage and gatherings would be more successful within the confines of the Nevada Wild Horse Range. Monitoring of utilization, trend, and actual use would be easier to conduct, with an attendant improvement in the condition of the range and of the wild horse population expected to occur as a result of these enhanced management practices.

Fencing the boundary of the Nevada Wild Horse Range, if required, would restrict or prevent the movement of wild horses from that area; it would not, however, restrict or prevent the movement of wild horses within the 394,000 acre Nevada Wild Horse Range.

The installation of fencing, if necessary, to protect riparian areas (including springs) would restrict wild horse use on a maximum of 3,850 acres. This acreage represents 1 percent of the Nevada Wild Horse Range and would result in minimal impacts to wild horses. Wild horses would be excluded from riparian areas along Breen Creek and from springs. Water would be made available to wild horses either by piping it off-site to a trough or, in the case of Breen Creek, by constructing gaps in the exclosure fencing at one-half mile intervals.

Approximately 118 burros would be removed from the planning area, resulting in a 100 percent reduction in burro numbers on the Nellis Air Force Range.

VISUAL RESOURCES

No surface disturbing actions would be initiated or authorized by BLM in the Timber Mountain Caldera National Natural Landmark, thereby preventing any impacts to visual resources in the VRM Interim Class II area (110,720 acres). Impacts to visual resources on the remainder of the planning area would be minimally impacted by the proposed management actions.

If necessary, a maximum of 280 miles of fence could be built in the planning area, which would alter color, form, and texture of visual resources on 509 acres. Mitigation measures would be developed in site-specific EAs and would include limiting the disturbance to the minimum necessary to accomplish the task. Other measures would involve relocating projects to less conspicuous sites, recontouring the area, and reseeding with native species at those locations where annual precipitation exceeds 8 inches. All mitigation measures would comply with BLM's Visual Resource Management Class guidelines.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

No impacts to the proposed Timber Mountain Caldera National Natural Landmark ACEC are anticipated. No management actions are proposed within the boundaries of the ACEC, and surface disturbing actions initiated or proposed by BLM would be prohibited within the ACEC. The entire planning area, including the proposed ACEC, is withdrawn from all forms of entry under the public land laws, including the mining and mineral leasing laws; this provides the highest level of protection available.

UNAVOIDABLE ADVERSE IMPACTS

Fence construction, if necessary, would result in an unavoidable adverse impact on 509 acres of vegetation and wildlife habitat. The wild horse population on the planning area would decrease by 4,000 head. Ecological condition would be lowered to an early seral stage within a one-quarter mile radius of all water sources utilized by wild horses and livestock.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Beyond those irreversible and irretrievable commitments of resources identified under Management

Guidance Common to All Alternatives, production of fencing materials and the construction of fences, if necessary, would require minerals and the use of fossil fuels.

RELATIONSHIP BETWEEN SHORT-TERM USE AND LONG-TERM PRODUCTIVITY

Long-term productivity would be emphasized under Alternative B. Fence construction, if necessary, would result in short-term impacts; in the long- term, productivity would be restored by natural revegetation and succession.

Restriction of wild horses to the Nevada Wild Horse Range and the removal of 4,000 wild horses from the planning area would improve the ecological condition on large portions of the Nellis Air Force Range. In conjunction with the fencing of riparian areas, if necessary, and the development of permanent water sources for wildlife, these actions identified under Alternative B would restore and maintain the long-term productivity of the planning area. Long-term productivity would be maintained on the 110,720 acre Timber Mountain Caldera National Natural Landmark ACEC by prohibiting BLM initiated or authorized surface disturbing actions within the ACEC.

CUMULATIVE IMPACTS

The cumulative impacts identified in the Management Guidance Common to All Alternatives section of this chapter would persist under Alternative B; impacts specific to Alternative B would, however, increase the cumulative impacts.

Alternative B would affect 18 percent (394,000 acres) of the planning area by continuing wild horse use on the Nevada Wild Horse Range; the level of use would, however, be initially reduced by 50 percent. Approximately 4,000 wild horses would be removed from the planning area. Wild horse use would be eliminated on 63 percent (1,390,000 acres) of the planning area over the long- term, although a limited number of animals would be expected to occasionally stray off the Nevada Wild Horse Range. Fence construction, if necessary, would impact 509 acres; 56,375 acres (riparian areas, water sources, and the Naquinta Springs allotment), in addition to the 1,390,000 acres identified above, would be protected from the impacts that result from wild horse and livestock grazing. Beneficial impacts would occur on the 110,720 acres within the Timber Mountain Caldera National Natural Landmark ACEC by the prohibition of BLM initiated or authorized actions within the ACEC.

When combined with the 38,574 acres identified to be directly affected by management actions discussed under Management Guidance Common to All Alternatives and the 19,600 acres identified to be impacted by military uses, Alternative B would cumulatively impact 91 percent (2,009,896 acres) of the planning area. Beneficial impacts would occur to soils, vegetation resources, and wildlife habitat on 1,557,095 acres as a result of reductions in wild horse and livestock numbers, protective fencing if necessary, and the prohibition of BLM initiated or authorized actions within the ACEC. Impacts on the Nevada Wild Horse Range (394,000 acres) would decrease due to reductions in wild horse numbers. Relatively minor negative impacts associated with livestock grazing would continue on 37,175 acres.

Rights-of-way development and mineral exploration and development would heavily impact an additional 1,399 acres. An additional 0.17 percent (3,668 acres) of the planning area would be indirectly affected; the presence of wild horses and livestock would cause wildlife to avoid habitat within a certain radius of water sources.

Foreseeable future uses, other than those already identified under Management Guidance Common to All Alternatives, are linked to the presence of wild horses on the planning area. Wild horses would continue to exist on the Nevada Wild Horse Range in proper numbers, the environment would not be degraded and conflicts between the military uses and wild horses would occur only on the Nevada Wild Horse Range.

The net cumulative impacts of Alternative B are beneficial, primarily due to the control of the wild horse population, with a concurrent reduction in negative impacts to vegetation and wildlife habitat. Impacts resulting from military uses and use of private lands, although individually significant, are not expected to be cumulatively significant. Alternative B is thus projected to have a net beneficial cumulative impact on the planning area.

CHAPTER 5

CONSULTATION AND COORDINATION

CHAPTER 5

CONSULTATION AND COORDINATION

INTRODUCTION

This chapter summarizes the consultation and coordination conducted in the preparation of the Nellis Air Force Range Draft Resource Plan/ Draft Environmental Impact Statement. In the course of preparing this document, formal and informal efforts have been made to involve the public, other Federal agencies, and State and local Governments in the planning process. Several points of public involvement are mandated by regulations; numerous other actions were taken to further involve the public.

Prior to the actual writing of the document, an involved process of data gathering and other preparatory activities occurred. This process included data assembly, public participation, interagency coordination, and preparation of a Management Situation Analysis (MSA). The MSA, as well as documentation of consultation and coordination efforts, are on file in the Las Vegas District Office. Consultation and coordination with agencies, organizations, and individuals occurred in a variety of ways throughout the planning process. A complete mailing list of those contacted throughout the planning process is also on file in the Las Vegas District Office.

PUBLIC PARTICIPATION

The public participation process began in July 1988 with the publication of a Notice of Intent to prepare a Resource Plan in the Federal Register (Volume 53, No. 131, Friday, July 8, 1988, page 25694).

On July 12, 1988, a scoping report was sent to approximately 250 individuals, State and Federal agencies, units of local Government, organizations, and members of private industry. This report summarized the planning issues, planning criteria, management, and resource concerns identified by BLM Managers and Resource Specialists. The public was asked to evaluate the issues, planning criteria, and management concerns and to identify any additional issues, criteria or concerns that should be addressed in the resource plan.

After distributing scoping reports, the District hosted three public meetings. These meetings were held on July 26,1988 at the Lincoln County Annex in Alamo, Nevada; on July 27,1988 at the Tonopah Convention Center in Tonopah, Nevada; and on July 28,1988 at the BLM Las Vegas District Office in Las Vegas, Nevada. BLM personnel were available to explain the planning process and issues, and to discuss the concerns of those in attendance. A total of 15 people attended the three meetings. Concerns raised at these meetings included impacts to riparian areas and springs from wild horses, impacts to desert tortoise habitat, access for management, cultural resource protection, recreational hunting, wildlife poaching, reclamation of disturbed areas, and fire suppression activities. In addition to the general public, a number of special interest groups, including the Sierra Club, the Motorcycle Racing Association of Nevada and the Nevada Council of Professional Archeologists, were represented. Six individuals submitted written comments during the meetings (summarized below).

During the 30-day comment period which ended August 12, 1988, seven comment forms and 18 letters were received, for a total of 25 responses. One response was from an individual, nine were from organizations, two were from local governmental entities, nine from Nevada State agencies, and four were from Federal agencies. A summary and discussion of the comments follows; the letters and comment forms are on file in the Las Vegas District Office and are available for public review.

Comments were divided into nine general categories: wild horses, vegetation, wildlife and wildlife habitat, cultural resources, access, minerals, inventories, wilderness study areas and roadless areas, and impacts from military uses.

Four comments were received concerning the management of wild horses on the Nellis Air Force Range. The comments suggested management strategies for wild horses that ranged from maintaining the current policies, as stated in the existing HMAP, to expanding the Nevada Wild Horse Range to encompass the

1971 use area. These concerns are addressed in Chapters 2 and 4.

Twelve comments dealt with the maintenance of the natural diversity of the planning area, the identification, protection, and enhancement of unusual or sensitive vegetation communities, the protection of threatened and endangered plants, and the restoration of disturbed areas. Discussion of these concerns can be found in Chapters 1, 2, and 4.

Wildlife and wildlife habitat issues were identified in ten comments. Areas of concern included the protection of wildlife habitat (big-game concentration areas, raptor nesting areas, and wetlands), the management of population levels, and the protection of threatened and endangered species. These topics are discussed in Chapters 2 and 4.

Cultural resource protection was the focus of four comments. Management of cultural resources is mandated by law; management direction is summarized in the Management Guidance Common to All Alternatives section of Chapter 2.

The need for increased access to the Nellis Air Force Range was proposed in five comments. The Air Force has restricted access to the withdrawn lands for security and safety reasons. As stated in the planning criteria, public access will not be addressed in this document. Existing administrative procedures permit resource management personnel to gain controlled access to the planning area.

Two comments were received that addressed the potential opening of the Nellis Air Force Range for mineral exploration and development. At this time, the Air Force has indicated that security and safety factors necessitate the continued closure of the entire withdrawn area to mineral activities. Mineral related activities are discussed in Chapters 1 and 2.

Four comments suggested the need for additional inventories of threatened and endangered species and cultural resources on the planning area. As identified in the planning criteria, time constraints and a perceived lack of conflicting uses on the withdrawn lands determined the use of existing data in the preparation of this resource plan.

The status of wilderness study areas and roadless areas within and adjacent to the planning area was addressed in two comments. This concern is discussed in Chapter 2.

The majority of comments (14) expressed concerns about the impacts to natural and cultural resources that may result from military activities on the Nellis Air Force Range. This resource plan is limited in its scope to those resources over which the BLM has management authority. Therefore, no discussion of military activities on the withdrawn lands is included in this document. Military uses of the Nellis Air Force Range and the impacts resulting from those uses were analyzed in Environmental Impact Statements (1981,1986), completed prior to the withdrawal of area.

MILITARY INVOLVEMENT AND COORDINATION

The Military Lands Withdrawal Act of 1986, Public Law 99-606, withdrew the Nellis Air Force Range and other military installations for military purposes. Section 3 of the Act directs the Secretary of the Interior to manage the Nellis Air Force Range under the Federal Lands Policy and Management Act of 1976 and to prepare a management plan by November of 1989. The plan is to be developed after consultation with the Secretary of the military department concerned (Nellis Air Force Range). Section 12 of the Act required the Secretary of the Interior to determine, with concurrence of the Secretary of the military department, which public and acquired lands could be opened for operation of mining and mineral laws.

Contacts with staff of the 554th Range Group, Nellis Air Force Base, were made throughout the preparation of the draft document. The Air Force participated in the scoping process and was represented at the scoping meetings. Nellis Air Force Range officials reviewed and provided official comments on the Management Situation Analysis, formulation of the alternatives and on the Preliminary Draft RP/EIS. Informal reviews of various sections of this document were also conducted by the Nellis Air Force Range Staff and the Range Commander.

CONSULTATION

As mandated by Section 7 of the Endangered Species Act, consultation between the BLM and the U.S. Fish and Wildlife Service (USFWS) is required prior to the implementation of any project which may affect any Federally threatened, endangered or sensitive plant or animal species (or their habitat). Formal and informal consultations have been held with USFWS throughout the preparation of this plan.

The Nevada Division of Wildlife (NDOW) has been contacted concerning State listed threatened and endangered wildlife and plant species. This resource plan is consistent with legislation protecting State listed species. Coordination and consultation with the State will be continued throughout the planning process and during implementation.

The BLM cultural resource management program operates in accordance with 36 Code of Federal Regulations (CFR), Part 800, which outline specific procedures for consultation between the BLM and the State Historic Preservation Officer (SHPO). A Memorandum of Agreement (MOA)(NSO-196) between the SHPO, the Advisory Council on Historic Preservation and the BLM Nevada State Office became effective on May 28,1985. This MOA coordinates the provisions of 36 CFR 800 with existing BLM procedures, emphasizing the BLM planning system. The MOA also incorporates mechanisms for information exchange between BLM and the SHPO, establishes reporting standards, and defines those undertakings and activities requiring or not requiring consultation.

PUBLIC REVIEW OF THE DRAFT

The Nellis Air Force Range DRP/DEIS has been sent to and comments requested from the general public and the following:

Congressional Delegation

U.S. Senator Richard Bryan
U.S. Senator Harry Reid
U.S. Congressman James Bilbray
U.S. Congresswoman Barbara Vucanovich

Federal Agencies

Advisory Council on Historic Preservation
Department of Agriculture
- Forest Service
- Soil Conservation Service
- Agricultural Stabilization and Conservation Service

Department of Commerce
- National Oceanic and Atmospheric Administration

Department of Defense
- Army Corps of Engineers
- Assistant Secretary of the Air Force
- LEEV/Bolling Air Force Base
- Nellis Air Force Base

Department of Energy
- Western Area Power Administration

Department of the Interior
- Bureau of Indian Affairs
- Bureau of Mines
- Bureau of Reclamation
- Fish and Wildlife Service
- Geological Survey
- National Park Service
- Office of Environmental Project Review

Environmental Protection Agency

State Agencies

Cooperative Extension Services
Nevada Department of Wildlife
Nevada State Clearinghouse
Office of the Governor
State Senators and Assemblymen (Clark, Esmeralda, Lincoln, Nye Counties)
University of Nevada, Reno and Las Vegas
- Desert Research Institute
- Fleischman College of Agriculture
- Center for Business and Economic Research
- Department of Biological Sciences
- Mackay School of Mines
- Nevada Bureau of Mines
- Renewable Natural Resource Center

Nevada State Historical Society

Local Government

Citizens Advisory Councils/Town Boards (10)
City of Mesquite

Clark County Commission
Clark County Dept. of Comprehensive Planning
Clark County Extension Agent
Clark County Conservation District/Soil
Clark County Southern Nevada Museum
County Game Management Boards (4)
Esmeralda County Commission
Henderson Planning Department
Lincoln County Commission
Lincoln County Conservation District
Las Vegas City Manager
Mayor of Boulder City
Mayor of Caliente
Mayor of Henderson
Mayor of Las Vegas
Mayor of North Las Vegas
North Las Vegas Planning Department
Nye County Commission
Pioche Chamber of Commerce

Native American Councils

Las Vegas Indian Center
Las Vegas Tribal Council
Pahrump Paiutes
Western Shoshone National Council

Other Organizations

American Curly Bashkir Reg.
American Horse Protection Association
American Humane Society
American Wild Horse and Burro Foundation
Animal Protection Institute
Archeo-Nevada Society
Central Nevada Newspapers
Defenders of Wildlife
Desert Bighorn Council
Desert Fishes Council
Desert Tortoise Council
Ducks Unlimited
Earth First
Ecology Ctr. of So. CA.
Fraternity of the Desert Bighorn
Friends of Nevada Wilderness
Funds for Animals, Inc.
Great Basin Zoological Society
Humane Society of Southern Nevada
International Society for the Protection of Wild Horses and Burros
Lincoln County Sportsman's Association
Los Angeles Department of Water and Power
Minerals Exploration Coalition
Motor Cycle Racing Association of Nevada
Mountain States Legal Foundation
Multiple Use Adv. Board on Federal Land Laws
National Mustang Association
National Wild Horse Association
National Wildlife Federation
Natural Resources Defense Council
Nature Conservancy
Nevada Archeological Association
Nevada Cattleman's Association
Nevada Conservation Forum
Nevada Council of Professional Archeologists
Nevada Federation of Animal Protection Organizations
Nevada Mining Association
Nevada Outdoor Recreation Association
Nevada Open Land Organized Council
Nevada Organization for Wildlife
Nevada Public Land Users Association
Nevada Wilderness Association
Nevada Wild Horse Commission
Nevada Wildlife Commission
Nevada Wildlife Federation
Northern Nevada Native Plant Society
Nevada Off-Highway Users Council
ORV Groups
Public Lands Institute
Public Resource Association
Reno Newspapers
Sagebrush Alliance
Save the Mustangs
Sierra Club
Soil Conservation Society
Southern Nevada Conservation Council
Southern Nevada Environmental Forum
The Wildlife Society
The Wilderness Society
Wild Horse and Burro Committee for the National Academy of Sciences
Wild Horse Organized Assistance
Wyoming Advocates for Animals

Public Libraries

Beatty Community Library
323 Montgomery
Beatty, NV. 89002

Blue Diamond Library
P.O. Box 40
Blue Diamond, NV.89004

Boulder City Library
539 California Ave.
Boulder City, NV. 89005

Bunkerville Library
P.O. Box 10
Bunkerville, NV. 89007

Charleston Heights Library
800 Brush Street
Las Vegas, NV. 89107

Clark County Community College
Learning Resource Center
3200 E. Cheyenne Ave.
North Las Vegas, NV. 89030

Clark County Library
1401 E. Flamingo Rd.
Las Vegas, NV. 89109

DOI Nat. Resources Library
Serials Branch-GE
18th & C Streets,NW
Washington, D.C. 20240

Elko County Library
720 Court Street
Elko, NV. 89801

Esmeralda County Public Library
County Courthouse
Goldfield, NV. 89013

Goodsprings Library
P.O. Box 667
Goodsprings,NV. 89109

Henderson Library
55 Water Street
Henderson, NV. 89015

Indian Springs Library
P.O. Box 628
Indian Springs, NV. 89018

Lander County Library
Battle Mountain,NV. 89820

Las Vegas Public Library
1726 E. Charleston Blvd.
Las Vegas, NV. 89104

Lincoln County Library
Caliente, NV. 89008

Lincoln County Library
P.O. Box 248
Pioche, NV. 89043

Mineral County Public Library
P.O. Box 1397
Hawthorne, NV. 89415

Moapa Valley Library
P.O. Box 387
Overton, NV. 89040

Mt. Charleston Public Library
P.O. Box 269
S.R. 89038
Mt. Charleston, NV. 89101

North Las Vegas Library
2300 Civic Center
North Las Vegas, NV. 89030

Nye County Library
P.O. Box 153
Tonopah, NV. 89049

Pahrump Public Library
Pahrump,NV. 89041

State of Nevada Library
Library Bldg.
Capitol Complex
Carson City, NV. 89701

Sunrise Public Library
100 N. Nellis Blvd.
Las Vegas, NV. 89110

University of Nevada, Las Vegas
James R. Dickinson Library-Documents Dept.
4505 S. Maryland Pkwy.
Las Vegas, NV. 89154

University of Nevada, Reno
Getchell Library
Government Publications Dept.
Reno,NV. 89507

Virgin Valley Library
P.O. Box 113
Mesquite, NV. 89024

Washoe County Library
Documents Dept.
P.O. Box 2151
Reno, NV 89505

White Pine County Library
Courthouse Plaza
Ely, NV. 89301

Bureau of Land Management Offices

Arizona Strip District Office
196 East Tabernacle
St. George, Utah 84770

Battle Mountain District Office
North 2nd and South Scott Streets
Battle Mountain, NV 89820

Caliente Resource Area Office
Caliente, NV 89008

Carson City District Office
1050 E. William Street
Carson City, NV. 89801

Elko District Office
2002 Idaho Street
Elko, NV. 89801

Ely District Office
Star Route 5, Box 1
Ely, NV. 89301

Las Vegas District Office
4765 West Vegas Drive
Las Vegas, NV. 89126

Tonopah Resource Area Office
Battle Mountain District
102 Old Radar Base Rd.
Tonopah, NV. 89049

Winnemucca District Office
704 E. 4th Street
Winnemucca, NV. 89445

CHAPTER 6

PREPARERS AND REVIEWERS

CHAPTER 6

PREPARERS AND REVIEWERS

The Nellis DRP/DEIS was prepared by an interdisciplinary team of resource specialists from the Caliente Resource Area and Las Vegas District offices Resources Management staff. Table 6-1 lists the names and qualifications of each team member.

The resource plan was reviewed by resource specialists and management staff within the Caliente Resource Area, Las Vegas District, and Nevada State offices of the BLM. Members of the 554th Range Group staff, Nellis Air Force Base, also provided review and comments. Reviewers and responsibilities are listed in Table 6-2.

TABLE 6-1

LIST OF PREPARERS

NAME	RESPONSIBILITY	EDUCATION	EXPERIENCE
Roger Alexander	Team Leader/Planner Writer	B.S. Wildlife Science	11 Years BLM
Jim Caplinger	Cartography	Drafting/Cartography	6 Years BLM
Diane Colcord	Special Graphics	B.A. Art Education	21 Years BLM
Dawna Ferris	Writer/Editor Cultural Resources	B.A. Romance Languages M.A. French B.A. Anthropology M.A. Anthropology (pending)	3 Years BLM
Edward Guerrero	Wildlife	B.S. Wildlife Science	8 Years BLM
Paul Myers	Social Economics	B.S. Economics	11 Years BLM
Gary Pavusko	Fire Management	B.S. Conservation A.A.S. Fire Science Management	12 Years BLM
David Schafersman	Soils/Water/Air	B.S. Forestry/Hydrology	10 Years BLM
Phil Seegmiller	Wild Horses and Burros	B.S. Range Management	13 Years BLM

TABLE 6-2

LIST OF REVIEWERS

NAME	PROGRAM/TITLE	AGENCY	REVIEW RESPONSIBILITY
Pat Barker	Cultural Resources	BLM/NSO*	Cultural Resources
Dave Goicoechea	Wildlife Habitat	BLM/NSO	Wildlife Habitat
Dave Griggs	Wild Horses and Burros	BLM/NSO	Wild Horses/Burros
Brad Hines	Range Management	BLM/NSO	Livestock Grazing
Jack Seley	Planning/Environmental	BLM/NSO	Complete Document
Steve Smith	Recreation/VRM	BLM/NSO	Recreation/VRM
Neil Talbot	Planning/ACECs	BLM/NSO	Complete Document
Dave Wolf	Wilderness	BLM/NSO	Wilderness
Curtis Tucker	Overall	BLM/CRA*	Complete Document
Ben Collins	Overall	BLM/LVDO*	Complete Document
Harley Dickensheets	Overall	USAF/NAFB*	Complete Document

* NSO - Nevada State Office
* CRA - Caliente Resource Area
* LVDO - Las Vegas District Office
* NAFB - Nellis Air Force Base

APPENDICES

APPENDIX A

MILITARY LANDS WITHDRAWAL ACT

Public Law 99-606
99th Congress

An Act

To withdraw certain public lands for military purposes, and for other purposes. Nov. 6, 1986 [H.R. 1790]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. WITHDRAWALS. Defense and national security. Mines and mining.

(a) BRAVO-20 BOMBING RANGE.—(1) Subject to valid existing rights and except as otherwise provided in this Act, the lands referred to in paragraph (2) of this subsection, and all other areas within the boundary of such lands as depicted on the map specified in such paragraph which may become subject to the operation of the public land laws, are hereby withdrawn from all forms of appropriation under the public land laws (including the mining laws and the mineral leasing and the geothermal leasing laws). Such lands are reserved for use by the Secretary of the Navy for—

(A) testing and training for aerial bombing, missile firing, and tactical maneuvering and air support; and

(B) subject to the requirements of section 3(f), other defense-related purposes consistent with the purposes specified in this paragraph.

(2) The lands referred to in paragraph (1) of this subsection are the public lands comprising approximately 21,576.40 acres in Churchill County, Nevada, as generally depicted on the map entitled "Bravo-20 Bombing Range Withdrawal—Proposed", dated April 1986, and filed in accordance with section 2. Nevada.

(3) This section does not affect the withdrawals of July 2, 1902, August 26, 1902, and August 4, 1904, under which the Bureau of Reclamation utilizes for flooding, overflow, and seepage purposes approximately 14,750 acres of the lands withdrawn and reserved by this subsection. Flood control.

(b) NELLIS AIR FORCE RANGE.—(1) Subject to valid existing rights and except as otherwise provided in this Act, the public lands described in paragraph (2) of this subsection are hereby withdrawn from all forms of appropriation under the public land laws (including the mining laws and the mineral leasing and the geothermal leasing laws). Such lands are reserved for use by the Secretary of the Air Force—

(A) as an armament and high-hazard testing area;

(B) for training for aerial gunnery, rocketry, electronic warfare, and tactical maneuvering and air support; and

(C) subject to the requirements of section 3(f), for other defense-related purposes consistent with the purposes specified in this paragraph.

(2) The lands referred to in paragraph (1) of this subsection are the lands comprising approximately 2,945,000 acres of land in Clark, Nye, and Lincoln Counties, Nevada, as generally depicted on the map entitled "Nellis Air Force Range Withdrawal—Proposed", dated January 1985, and filed in accordance with section 2. Nevada.

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(c) BARRY M. GOLDWATER AIR FORCE RANGE.—(1) Subject to valid existing rights and except as otherwise provided in this Act, the lands described in paragraph (2) of this subsection are hereby withdrawn from all forms of appropriation under the public land laws (including the mining laws and the mineral leasing and the geothermal leasing laws). Such lands are reserved for use by the Secretary of the Air Force for—

(A) an armament and high-hazard testing area;

(B) training for aerial gunnery, rocketry, electronic warfare, and tactical maneuvering and air support; and

(C) subject to the requirements of section 3(f), other defense-related purposes consistent with the purposes specified in this paragraph.

(2) The lands referred to in paragraph (1) of this subsection are the lands comprising approximately 2,664,423 acres in Maricopa, Pima, and Yuma Counties, Arizona, as generally depicted on the map entitled "Luke Air Force Range Withdrawal—Proposed", dated January 1985, and filed in accordance with section 2. Arizona.

(d) MCGREGOR RANGE.—(1) Subject to valid existing rights and except as otherwise provided in this Act, the public lands described in paragraph (2) of this subsection are hereby withdrawn from all forms of appropriation under the public land laws (including the mining laws and the mineral leasing and the geothermal leasing laws). Such lands are reserved for use by the Secretary of the Army—

(A) for training and weapons testing; and

(B) subject to the requirements of section 3(f), for other defense-related purposes consistent with the purposes specified in this paragraph.

(2) The lands referred to in paragraph (1) of this subsection are the lands comprising approximately 608,384.87 acres in Otero County, New Mexico, as generally depicted on the map entitled "McGregor Range Withdrawal—Proposed", dated January 1985, and filed in accordance with section 2. New Mexico.

(3) Any of the public lands withdrawn under paragraph (1) of this subsection which, as of the date of enactment of this Act, are managed pursuant to section 603 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1782) shall continue to be managed under that section until Congress determines otherwise.

(e) FORT GREELY MANEUVER AREA AND FORT GREELY AIR DROP ZONE.—(1) Subject to valid existing rights and except as otherwise provided in this Act, the lands described in paragraph (2) of this subsection are hereby withdrawn from all forms of appropriation under the public land laws (including the mining laws and the mineral leasing and the geothermal leasing laws), under an Act entitled "An Act to provide for the admission of the State of Alaska into the Union", approved July 7, 1958 (48 U.S.C. note prec. 21), and under the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.). Such lands are reserved for use by the Secretary of the Army for— Alaska.

(A) military maneuvering, training, and equipment development and testing; and

(B) subject to the requirements of section 3(f), other defense-related purposes consistent with the purposes specified in this paragraph.

(2) The lands referred to in paragraph (1) of this subsection are—

(A) the lands comprising approximately 571,995 acres in the Big Delta Area, Alaska, as generally depicted on the map entitled "Fort Greely Maneuver Area Withdrawal—Proposed", dated January 1985, and filed in accordance with section 2; and

(B) the lands comprising approximately 51,590 acres in the Granite Creek Area, Alaska, as generally depicted on the map entitled "Fort Greely, Air Drop Zone Withdrawal—Proposed", dated January 1985, and filed in accordance with section 2.

Alaska.

(f) FORT WAINWRIGHT MANEUVER AREA.—(1) Subject to valid existing rights and except as otherwise provided in this Act, the public lands described in paragraph (2) of this subsection are hereby withdrawn from all forms of appropriation under the public land laws (including the mining laws and the mineral leasing and the geothermal leasing laws), under an Act entitled "An Act to provide for the admission of the State of Alaska into the Union", approved July 7, 1958 (48 U.S.C. note prec. 21), and under the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.). Such lands are reserved for use by the Secretary of the Army for—

(A) military maneuvering;

(B) training for artillery firing, aerial gunnery, and infantry tactics; and

(C) subject to the requirements of section 3(f), other defense-related purposes consistent with the purposes specified in this paragraph.

(2) The lands referred to in paragraph (1) of this subsection are the lands comprising approximately 247,951.67 acres of land in the Fourth Judicial District, Alaska, as generally depicted on the map entitled "Fort Wainwright Maneuver Area Withdrawal—Proposed", dated January 1985, and filed in accordance with section 2.

SEC. 2. MAPS AND LEGAL DESCRIPTIONS.

(a) PUBLICATION AND FILING REQUIREMENT.—As soon as practicable after the date of enactment of this Act, the Secretary of the Interior shall—

(1) publish in the Federal Register a notice containing the legal description of the lands withdrawn and reserved by this Act; and

Federal Register, publication.

(2) file maps and the legal description of the lands withdrawn and reserved by this Act with the Committee on Energy and Natural Resources of the United States Senate and with the Committee on Interior and Insular Affairs of the United States House of Representatives.

(b) TECHNICAL CORRECTIONS.—Such maps and legal descriptions shall have the same force and effect as if they were included in this Act except that the Secretary of the Interior may correct clerical and typographical errors in such maps and legal descriptions.

(c) AVAILABILITY FOR PUBLIC INSPECTION.—Copies of such maps and legal descriptions shall be available for public inspection in the offices of the Director and appropriate State Directors of the Bureau of Land Management; the office of the commander, Bravo-20 Bombing Range; the offices of the Director and appropriate Regional Directors of the United States Fish and Wildlife Service; the office of the commander, Nellis Air Force Base; the office of the commander, Barry M. Goldwater Air Force Base; the office of the commander, McGregor Range; the office of the installation commander, Fort Richardson, Alaska; the office of the commander, Marine Corps Air Station, Yuma, Arizona; and the office of the Secretary of Defense.

Alaska. Arizona.

(d) REIMBURSEMENT.—The Secretary of Defense shall reimburse the Secretary of the Interior for the cost of implementing this section.

SEC. 3. MANAGEMENT OF WITHDRAWN LANDS.

National Wildlife Refuge System.

(a) MANAGEMENT BY THE SECRETARY OF THE INTERIOR.—(1) During the period of the withdrawal, the Secretary of the Interior shall manage the lands withdrawn under section 1 (except those lands within a unit of the National Wildlife Refuge System) pursuant to the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.) and other applicable law, including the Recreation Use of Wildlife Areas Act of 1962 (16 U.S.C. 460k et seq.), and this Act. Lands within the Desert National Wildlife Range and the Cabeza Prieta National Wildlife Refuge shall be managed pursuant to the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd et seq.) and other applicable law. No provision of this Act, except sections 4, 11, and 12, shall apply to the management of the Desert National Wildlife Range or the Cabeza Prieta National Wildlife Refuge.

(2) To the extent consistent with applicable law and Executive orders, the lands withdrawn under section 1 may be managed in a manner permitting—

(A) the continuation of grazing pursuant to applicable law and Executive orders where permitted on the date of enactment of this Act;

(B) protection of wildlife and wildlife habitat;

(C) control of predatory and other animals;

(D) recreation; and

(E) the prevention and appropriate suppression of brush and range fires resulting from nonmilitary activities.

(3)(A) All nonmilitary use of such lands, other than the uses described in paragraph (2), shall be subject to such conditions and restrictions as may be necessary to permit the military use of such lands for the purposes specified in or authorized pursuant to this Act.

(B) The Secretary of the Interior may issue any lease, easement, right-of-way, or other authorization with respect to the nonmilitary use of such land only with the concurrence of the Secretary of the military department concerned.

Safety. Defense and national security.

(b) CLOSURE TO PUBLIC.—(1) If the Secretary of the military department concerned determines that military operations, public safety, or national security require the closure to public use of any road, trail, or other portion of the lands withdrawn by this Act, the Secretary may take such action as the Secretary determines necessary or desirable to effect and maintain such closure.

(2) Any such closure shall be limited to the minimum areas and periods which the Secretary of the military department concerned determines are required to carry out this subsection.

(3) Before and during any closure under this subsection, the Secretary of the military department concerned shall—

(A) keep appropriate warning notices posted; and

(B) take appropriate steps to notify the public concerning such closures.

(c) MANAGEMENT PLAN.—The Secretary of the Interior (after consultation with the Secretary of the military department concerned) shall develop a plan for the management of each area withdrawn

under section 1 during the period of such withdrawal. Each plan shall—

(1) be consistent with applicable law;

(2) be subject to conditions and restrictions specified in subsection (a)(3) of this section;

(3) include such provisions as may be necessary for proper management and protection of the resources and values of such areas; and

(4) be developed not later than three years after the date of enactment of this Act.

(d) BRUSH AND RANGE FIRES.—The Secretary of the military department concerned shall take necessary precautions to prevent and suppress brush and range fires occurring within and outside the lands withdrawn under section 1 as a result of military activities and may seek assistance from the Bureau of Land Management in the suppression of such fires. The memorandum of understanding required by subsection (e) shall provide for Bureau of Land Management assistance in the suppression of such fires, and for a transfer of funds from the Department of the Navy, Army, or Air Force, as appropriate, to the Bureau of Land Management as compensation for such assistance.

(e) MEMORANDUM OF UNDERSTANDING.—(1) The Secretary of the Interior and the Secretary of the military department concerned shall (with respect to each land withdrawal under section 1) enter into a memorandum of understanding to implement the management plan developed under subsection (c). Any such memorandum of understanding shall provide that the Director of the Bureau of Land Management shall provide assistance in the suppression of fires resulting from the military use of lands withdrawn under section 1 if requested by the Secretary of the military department concerned.

(2) The duration of any such memorandum shall be the same as the period of the withdrawal of the lands under section 1.

(f) ADDITIONAL MILITARY USES.—(1) Lands withdrawn by section 1 (except those within the Desert National Wildlife Range or within the Cabeza Prieta National Wildlife Refuge) may be used for defense-related uses other than those specified in such section. The Secretary of Defense shall promptly notify the Secretary of the Interior in the event that the lands withdrawn by this Act will be used for defense-related purposes other than those specified in section 1. Such notification shall indicate the additional use or uses involved, the proposed duration of such uses, and the extent to which such additional military uses of the withdrawn lands will require that additional or more stringent conditions or restrictions be imposed on otherwise-permitted nonmilitary uses of the withdrawn land or portions thereof.

SEC. 4. SPECIAL WILDLIFE RULES.

(a) NELLIS AIR FORCE RANGE.—(1) Neither the withdrawal under section 1(b) nor any other provision of this Act shall be construed to amend—

(A) the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd et seq.) or any other law related to management of the National Wildlife Refuge System; or

(B) any Executive order or public land order in effect on the date of enactment of this Act with respect to the Desert National Wildlife Refuge.

(2) Neither the withdrawal under section 1(b) nor any other provision of this Act shall be construed to amend any memorandum of understanding between the Secretary of the Interior and the Secretary of the Air Force regarding the administration and joint use of a portion of the Desert National Wildlife Range. The provisions of the memorandum of understanding between the Secretary of the Interior and the Department of the Air Force regarding Air Force operations on the Desert National Wildlife Range in effect on March 15, 1986, shall not be amended sooner than 90 days after the Secretary of the Interior has notified the Committee on Interior and Insular Affairs of the House of Representatives, the Committee on Energy and Natural Resources of the Senate, the Committees on Armed Services of the Senate and the House of Representatives, the Committee on Merchant Marine and Fisheries of the House of Representatives, and the Committee on Environment and Public Works of the Senate of any proposed amendments to such provisions.

(b) BARRY M. GOLDWATER AIR FORCE RANGE.—(1) Neither the withdrawal under section 1(c) nor any other provision of this Act shall be construed to amend—

(A) the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd et seq.) or any other law related to management of the National Wildlife Refuge System; or

(B) any Executive order or public land order in effect on the date of enactment of this Act with respect to the Cabeza Prieta National Wildlife Refuge.

(2) Neither the withdrawal under section 1(c) nor any other provision of this Act shall be construed to amend any memorandum of understanding between the Secretary of the Interior and the Secretary of the Air Force regarding the administration and joint use of a portion of the Cabeza Prieta National Wildlife Refuge. The provisions of the memorandum of understanding between the Secretary of the Interior and the Department of the Air Force regarding Air Force operations on the Cabeza Prieta National Wildlife Refuge in effect on March 24, 1975, shall not be amended sooner than 90 days after the Secretary of the Interior has notified the Committee on Interior and Insular Affairs of the House of Representatives, the Committee on Energy and Natural Resources of the Senate, the Committees on Armed Services of the Senate and the House of Representatives, the Committee on Merchant Marine and Fisheries of the House of Representatives, and the Committee on Environment and Public Works of the Senate of any proposed amendments to such provisions.

SEC. 5. DURATION OF WITHDRAWALS.

(a) DURATION.—The withdrawal and reservation established by this Act shall terminate 15 years after the date of enactment of this Act.

(b) DRAFT ENVIRONMENTAL IMPACT STATEMENT.—(1) No later than 12 years after the date of enactment of this Act, the Secretary of the military department concerned shall publish a draft environmental impact statement concerning continued or renewed withdrawal of any portion of the lands withdrawn by this Act for which that Secretary intends to seek such continued or renewed withdrawal. Such draft environmental impact statement shall be consistent with the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) applicable to such a draft environmental

impact statement. Prior to the termination date specified in subsection (a), the Secretary of the military department concerned shall hold a public hearing on any draft environmental impact statement published pursuant to this subsection. Such hearing shall be held in the affected State or States in order to receive public comments on the alternatives and other matters included in such draft environmental impact statement.

Nevada.

(2)(A) For purposes of such draft environmental impact statement published by the Secretary of the Navy, the term "lands withdrawn by this Act" shall be deemed to include lands withdrawn by public land orders 275, 788, 898, and 2635 and lands proposed for withdrawal as specified in the draft environmental impact statement for the proposed master land withdrawal, Naval Air Station, Fallon, Nevada.

(B) For purposes of this subsection, lands withdrawn by section 1(b) shall be deemed to include lands withdrawn by Public Law 98-485.

98 Stat. 2261.

(c) EXTENSIONS OR RENEWALS.—The withdrawals established by this Act may not be extended or renewed except by an Act or joint resolution.

SEC. 6. NEVADA REPORT.

Health and medical care. Safety.

(a) SPECIAL NEVADA REPORT.—No later than five years after the date of enactment of this Act, the Secretary of the Air Force, the Secretary of the Navy, and the Secretary of the Interior shall submit to Congress a joint report. In addition to the other matters required by this section, the report shall include an analysis and an evaluation of the effects on public health and safety throughout Nevada of—

(1) the operation of aircraft at subsonic and supersonic speeds;

(2) the use of aerial and other gunnery, rockets, and missiles; and

(3) the uses specified in section 1.

(b) EVALUATION OF CUMULATIVE EFFECTS OF CONTINUED OR RENEWED WITHDRAWAL.—Each of the military departments concerned and the Secretary of the Interior shall, in the report required by this section, evaluate the cumulative effects of continued or renewed withdrawal for military purposes of the military department concerned of some or all of the lands withdrawn by sections 1(a) and 1(b) on the environment and population of Nevada. In performing this evaluation, there shall be considered—

(1) the actual and proposed withdrawal for military and related purposes of other lands in Nevada, including (but not limited to)—

(A) lands withdrawn by sections 1(a) and 1(b) of this Act and by Public Law 98-485 (98 Stat. 2261);

(B) lands withdrawn by Public Land Orders 275, 788, 898, and 2635;

(C) lands proposed for withdrawal as specified in the draft environmental impact statement for the proposed master land withdrawal, Naval Air Station, Fallon, Nevada; and

(D) lands withdrawn or being considered for withdrawal for use by the Department of Energy; and

Real property. Defense and national security.

(2) the cumulative impacts on public and private property in Nevada and on the fish and wildlife, cultural, historic, scientific, recreational, wilderness, and other values of the public lands of Nevada resulting from military and defense related uses of the lands withdrawn by sections 1(a) and 1(b) and the other lands described in paragraph (1) of this subsection.

(c) MITIGATION MEASURES.—The report required by this subsection shall include an analysis and an evaluation of possible measures to mitigate the cumulative effect of the withdrawal of public lands in Nevada for military and defense-related purposes, and of use of the airspaces over public lands in Nevada for such purposes, on people and property in Nevada and the fish and wildlife, cultural, historic, scientific, wilderness, and other resources and values of the public lands in Nevada (including recreation, mineral development, and agriculture).

SEC. 7. ONGOING DECONTAMINATION.

(a) PROGRAM.—Throughout the duration of the withdrawals made by this Act, the Secretary of the military department concerned, to the extent funds are made available, shall maintain a program of decontamination of lands withdrawn by this Act at least at the level of cleanup achieved on such lands in fiscal year 1986.

President of U.S.

(b) REPORTS.—At the same time as the President transmits to the Congress the President's proposed budget for the first fiscal year beginning after the date of enactment of this Act and for each subsequent fiscal year, each such Secretary shall transmit to the Committees on Appropriations, Armed Services, and Energy and Natural Resources of the Senate and to the Committees on Appropriations, Armed Services, and Interior and Insular Affairs of the House of Representatives a description of the decontamination efforts undertaken during the previous fiscal year on such lands and the decontamination activities proposed for such lands during the next fiscal year including:

(1) amounts appropriated and obligated or expended for decontamination of such lands;

(2) the methods used to decontaminate such lands;

(3) amount and types of contaminants removed from such lands;

(4) estimated types and amounts of residual contamination on such lands; and

(5) an estimate of the costs for full decontamination of such lands and the estimate of the time to complete such decontamination.

SEC. 8. REQUIREMENTS FOR RENEWAL.

(a) NOTICE AND FILING.—(1) No later than three years prior to the termination of the withdrawal and reservation established by this Act, the Secretary of the military department concerned shall advise the Secretary of the Interior as to whether or not the Secretary of the military department concerned will have a continuing military need for any of the lands withdrawn under section 1 after the termination date of such withdrawal and reservation.

(2) If the Secretary of the military department concerned concludes that there will be a continuing military need for any of such lands after the termination date, that Secretary shall file an application for extension of the withdrawal and reservation of such needed lands in accordance with the regulations and procedures of the Department of the Interior applicable to the extension of withdrawals of lands for military uses.

(3) If, during the period of withdrawal and reservation, the Secretary of the military department concerned decides to relinquish

all or any of the lands withdrawn and reserved by this Act, such Secretary shall file a notice of intention to relinquish with the Secretary of the Interior.

Hazardous materials.

(b) CONTAMINATION.—(1) Before transmitting a notice of intention to relinquish pursuant to subsection (a), the Secretary of Defense, acting through the military department concerned, shall prepare a written determination concerning whether and to what extent the lands that are to be relinquished are contaminated with explosive, toxic, or other hazardous materials.

(2) A copy of such determination shall be transmitted with the notice of intention to relinquish.

Federal Register, publication.

(3) Copies of both the notice of intention to relinquish and the determination concerning the contaminated state of the lands shall be published in the Federal Register by the Secretary of the Interior.

(c) DECONTAMINATION.—If any land which is the subject of a notice of intention to relinquish pursuant to subsection (a) is contaminated, and the Secretary of the Interior, in consultation with the Secretary of the military department concerned, determines that decontamination is practicable and economically feasible (taking into consideration the potential future use and value of the land) and that upon decontamination, the land could be opened to operation of some or all of the public land laws, including the mining laws, the Secretary of the military department concerned shall decontaminate the land to the extent that funds are appropriated for such purpose.

(d) ALTERNATIVES.—If the Secretary of the Interior, after consultation with the Secretary of the military department concerned, concludes that decontamination of any land which is the subject of a notice of intention to relinquish pursuant to subsection (a) is not practicable or economically feasible, or that the land cannot be decontaminated sufficiently to be opened to operation of some or all of the public land laws, or if Congress does not appropriate a sufficient amount of funds for the decontamination of such land, the Secretary of the Interior shall not be required to accept the land proposed for relinquishment.

(e) STATUS OF CONTAMINATED LANDS.—If, because of their contaminated state, the Secretary of the Interior declines to accept jurisdiction over lands withdrawn by this Act which have been proposed for relinquishment, or if at the expiration of the withdrawal made by this Act the Secretary of the Interior determines that some of the lands withdrawn by this Act are contaminated to an extent which prevents opening such contaminated lands to operation of the public land laws—

Public information.

(1) the Secretary of the military department concerned shall take appropriate steps to warn the public of the contaminated state of such lands and any risks associated with entry onto such lands;

(2) after the expiration of the withdrawal, the Secretary of the military department concerned shall undertake no activities on such lands except in connection with decontamination of such lands; and

Reports.

(3) the Secretary of the military department concerned shall report to the Secretary of the Interior and to the Congress concerning the status of such lands and all actions taken in furtherance of this subsection.

(f) REVOCATION AUTHORITY.—Notwithstanding any other provisions of law, the Secretary of the Interior, upon deciding that it is in

the public interest to accept jurisdiction over lands proposed for relinquishment pursuant to subsection (a), is authorized to revoke the withdrawal and reservation established by this Act as it applies to such lands. Should the decision be made to revoke the withdrawal and reservation, the Secretary of the Interior shall publish in the Federal Register an appropriate order which shall—

Federal Register, publication.

(1) terminate the withdrawal and reservation;

(2) constitute official acceptance of full jurisdiction over the lands by the Secretary of the Interior; and

Mines and mining.

(3) state the date upon which the lands will be opened to the operation of some or all of the public lands laws, including the mining laws.

SEC. 9. DELEGABILITY.

(a) DEFENSE.—The functions of the Secretary of Defense or of a military department under this title may be delegated.

(b) INTERIOR.—The functions of the Secretary of the Interior under this title may be delegated, except that an order described in section 7(f) may be approved and signed only by the Secretary of the Interior, the Under Secretary of the Interior, or an Assistant Secretary of the Department of the Interior.

SEC. 10. WATER RIGHTS.

Nothing in this Act shall be construed to establish a reservation to the United States with respect to any water or water right on the lands described in section 1 of this Act. No provision of this Act shall be construed as authorizing the appropriation of water on lands described in section 1 of this Act by the United States after the date of enactment of this Act except in accordance with the law of the relevant State in which lands described in section 1 are located. This section shall not be construed to affect water rights acquired by the United States before the date of enactment of this Act.

National Wildlife Refuge System.

SEC. 11. HUNTING, FISHING, AND TRAPPING.

All hunting, fishing, and trapping on the lands withdrawn by this Act shall be conducted in accordance with the provisions of section 2671 of title 10, United States Code, except that hunting, fishing, and trapping within the Desert National Wildlife Range and the Cabeza Prieta National Wildlife Refuge shall be conducted in accordance with the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd et seq.), the Recreation Use of Wildlife Areas Act of 1962 (16 U.S.C. 460k et seq.), and other laws applicable to the National Wildlife Refuge System.

SEC. 12. MINING AND MINERAL LEASING.

Federal Register, publication.

(a) DETERMINATION OF LANDS SUITABLE FOR OPENING.—As soon as possible after the enactment of this Act and at least every five years thereafter, the Secretary of the Interior shall determine, with the concurrence of the Secretary of the military department concerned, which public and acquired lands (except as provided in this subsection) described in subsections (a), (b), (d), (e), and (f) of section 1 of this Act the Secretary of the Interior considers suitable for opening to the operation of the Mining Law of 1872, the Mineral Lands Leasing Act of 1920, as amended, the Mineral Leasing Act for Acquired Lands of 1947, the Geothermal Steam Act of 1970, or any one or more of such Acts. The Secretary of the Interior shall publish a notice in the Federal Register listing the lands determined suit-

17 Stat. 91.
30 USC 181.
30 USC 351 note.
1091 note.
Federal Register, publication.
National Wildlife Refuge System.

able pursuant to this section and specifying the opening date, except that lands contained within the Desert National Wildlife Range in Nevada or within the Cabeza Prieta National Wildlife Refuge in Arizona shall not be determined to be suitable for opening pursuant to this section.

(b) OPENING LANDS.—On the day specified by the Secretary of the Interior in a notice published in the Federal Register pursuant to subsection (a), the land identified under subsection (a) as suitable for opening to the operation of one or more of the laws specified in subsection (a) shall automatically be open to the operation of such laws without the necessity for further action by either the Secretary or the Congress.

Federal Register, publication.

(c) EXCEPTION FOR COMMON VARIETIES.—No deposit of minerals or materials of the types identified by section 3 of the Act of July 23, 1955 (69 Stat. 367), whether or not included in the term "common varieties" in that Act, shall be subject to location under the Mining Law of 1872 on lands described in section 1.

30 USC 611.

17 Stat. 91.

(d) REGULATIONS.—The Secretary of the Interior, with the advice and concurrence of the Secretary of the military department concerned shall promulgate such regulations to implement this section as may be necessary to assure safe, uninterrupted, and unimpeded use of the lands described in section 1 for military purposes. Such regulations shall also contain guidelines to assist mining claimants in determining how much, if any, of the surface of any lands opened pursuant to this section may be used for purposes incident to mining.

(e) CLOSURE OF MINING LANDS.—In the event of a national emergency or for purposes of national defense or security, the Secretary of the Interior, at the request of the Secretary of the military department concerned, shall close any lands that have been opened to mining or to mineral or geothermal leasing pursuant to this section.

Defense and national security.

(f) LAWS GOVERNING MINING ON LANDS WITHDRAWN UNDER THIS ACT.—(1) Except as otherwise provided in this Act, mining claims located pursuant to this Act shall be subject to the provisions of the mining laws. In the event of a conflict between those laws and this Act, this Act shall prevail.

(2) All mining claims located under the terms of this Act shall be subject to the provisions of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.).

(g) PATENTS.—(1) Patents issued pursuant to this Act for locatable minerals shall convey title to locatable minerals only, together with the right to use so much of the surface as may be necessary for purposes incident to mining under the guidelines for such use established by the Secretary of the Interior by regulation.

(2) All such patents shall contain a reservation to the United States of the surface of all lands patented and of all nonlocatable minerals on those lands.

(3) For the purposes of this section, all minerals subject to location under the Mining Law of 1872 are referred to as "locatable minerals".

(h) REVOCATION.—Notwithstanding any other provision of law, the Secretary of the Interior, if the Secretary determines it necessary and appropriate for the purpose of consummating an exchange of lands or interests therein under applicable law, is hereby authorized and directed to revoke the Small Tract Act Classification S.T.049794 in Clark County, Nevada.

Nevada.

SEC. 13. IMMUNITY OF UNITED STATES.

The United States and all departments or agencies thereof shall be held harmless and shall not be liable for any injuries or damages to persons or property suffered in the course of any mining or mineral or geothermal leasing activity conducted on lands described in section 1 of this Act.

Military Lands Withdrawal Act of 1986.

SEC. 14. SHORT TITLE.

Sections 1 through 15 of this Act may be cited as the "Military Lands Withdrawal Act of 1986".

SEC. 15. REDESIGNATION.

Arizona.

The Luke Air Force Range in Arizona is hereby redesignated as the "Barry M. Goldwater Air Force Range". Any reference in any law, regulation, document, record, map, or other paper of the United States to the Luke Air Force Range shall be deemed to be a reference to the "Barry M. Goldwater Air Force Range".

16 USC 460ff-1.

SEC. 16. BOUNDARY ADJUSTMENT TO CUYAHOGA VALLEY NATIONAL RECREATION AREA.

Section 2 of the Act entitled "An Act to provide for the establishment of the Cuyahoga Valley National Recreational Recreation Area", approved December 27, 1974 (16 U.S.C. 460ff et seq.), is amended as follows:

(1) In subsection (a), strike out "numbered 655-90,001-A and dated May 1978" and insert "numbered 644-80,054 and dated July 1986".

(2) At the end of subsection (a), insert the following: "The recreation area shall also comprise any lands designated as 'City of Akron Lands' on the map referred to in the first sentence which are offered as donations to the Department of the Interior or which become privately owned. The Secretary shall revise such map to depict such lands as part of the recreation area.".

(3) In subsection (b), after the first sentence, insert the following:

State and local governments.

"The Secretary may not acquire fee title to any lands included within the recreation area in 1986 which are designated on the map referred to in subsection (a) as 'Scenic Easement Acquisition Areas'. The Secretary may acquire only scenic easements in such designated lands. Unless consented to by the owner from which the easement is acquired, any such scenic easement may not prohibit

any activity, the subdivision of any land, or the construction of any building or other facility if such activity, subdivision, or construction would have been permitted under laws and ordinances of the unit of local government in which such land was located on April 1, 1986, as such laws and ordinances were in effect on such date.".

Approved November 6, 1986.

LEGISLATIVE HISTORY—H.R. 1790:

CONGRESSIONAL RECORD, Vol. 132 (1986):
Oct. 17, considered and passed House.
Oct. 18, considered and passed Senate.

Public Law 100-338
100th Congress

An Act

To extend the withdrawal of certain public lands in Lincoln County, Nevada.

June 17, 1988
[H.R. 4799]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 1(b) of the Military Lands Withdrawal Act of 1986 (100 Stat. 3457) is amended by striking out the period at the end of paragraph (2) and by inserting in lieu thereof the following: "and lands comprising approximately 89,600 acres of land in Lincoln County, Nevada, as generally depicted on the map entitled 'Groom Mountain Addition to Nellis Air Force Range' dated September 1984 and filed in accordance with section 2.".

SEC. 2. CONFORMING AMENDMENT.

Section 5(b)(2) of the Military Lands Withdrawal Act of 1986 (100 Stat. 3463) is hereby amended by striking out subparagraph (B) and by striking out "(A)" after "(2)".

Approved June 17, 1988.

LEGISLATIVE HISTORY—H.R. 4799 (S. 1508):

CONGRESSIONAL RECORD, Vol. 134 (1988):
Mar. 25, S. 1508 considered and passed Senate.
Mar. 29, considered and passed House, amended.
June 10, Senate concurred in House amendment with an amendment.
June 14, H.R. 4799 considered and passed House.
June 15, considered and passed Senate.

19-139 O - 88 (338)

APPENDIX B

FIVE-PARTY
COOPERATIVE AGREEMENT

APPENDIX B

FIVE-PARTY COOPERATIVE AGREEMENT

PURPOSE AND AUTHORITY

This five-party cooperative agreement by and between the Department of Defense functioning through the Installation Commander, Nellis Air Force Base (NAFB), under the authority contained in 16 USC 670a-670f, 10 USC 2671, hereinafter referred to as the Air Force, the Department of Interior, functioning through the Regional Director of the U.S. Fish and Wildlife Service under the authority contained in 16 USC 661-666e, 668aa-668cc-6, hereinafter referred to as the Service and the Bureau of Land Management (BLM) functioning through the District Manager Las Vegas District of BLM under the authority contained in the Taylor Grazing Act of June 28, 1934; Wild Free-Roaming Horse and Burro Act, Pub. L. 92- 195, 16 USC 1331 et seq and Public Land Administration Act, Pub. L. 86-649, 43 USC 1363, PL02613 hereinafter referred to as the Bureau, the State of Nevada functioning through the Director, Nevada Department of Fish and Game under the authority contained in Nevada Revised Stat. and Nevada State Board Commission Regulations hereinafter referred to as the Department; and the Energy Research and Development Administration (ERDA) functioning through the Nevada Operations office of ERDA, hereinafter referred to as ERDA, is entered into for the purpose of protecting, developing and managing the Natural Resources of fish and wildlife, vegetation, watershed and wild horses and burros on the Nellis AFR, the Nevada Test Site and Tonopah Test Range, within the purview of Public Law 91- 190, National Environmental Policy Act 42 USC 4321, 4331-4335 and 4341-4347, Public Law 93-205, the Endangered Species Act of 1973, the Wild Free-Roaming Horse and Burro Act, Public Law 92-195, Taylor Grazing Act, 16 USC 1331 et seq, the Public Land Administration Act, Public Law 86-649 (43 USC 1363) PL02613, and under the principles of multiple use sustained yield as defined in Public Law 86- 517 (16 USC 528-531).

RESPONSIBILITIES

Whereas, the Air Force commander at Nellis AFB has jurisdiction over Nellis AF Range with the exception of the mineral, vegetative and wildlife resources thereon and those portions of Nellis AFR which are within the Desert National Wildlife Range and are used by the Air Force under the existing memorandum of understanding between the USDI and USAF, and

Whereas, the Service is the agency of the Federal government primarily responsible for the welfare of wildlife resources and research thereon with Federal responsibility for the management of migratory birds and protection of threatened and endangered species and Whereas, the Bureau is the agency of the Federal Government primarily responsible for habitat and the welfare and management of wild horses and burros, and retains jurisdiction over the mineral and vegetative resources of the land contained on the Nellis AFR, and

Whereas, the Department was created under the laws of the State of Nevada to provide an adequate and flexible system of control, propagation, protection and regulation of all fish and wildlife in Nevada, and

Whereas, the ERDA has jurisdiction over the Nevada Test Site and the Tonopah Test Range and is the agency of the Federal Government primarily responsible for research on atomic energy and other new energy forms, and has trusteeship responsibility to restore, conserve and protect the wildlife habitat thereon, and

Whereas, it is the mutual desire of the Air Force, the Service, the Bureau, the Department and ERDA to work in harmony for the common purpose of developing, maintaining and managing the wildlife and wild horse and burro resources for the best interest of the people of Nevada and the United States. Therefore, it is mutually agreed that:

SECTION I. Joint Activities of Air Force, Service, Bureau, Department and ERDA.

1. All parties shall cooperate in conducting resource inventory(s) of the area and developing resource management plan(s) for wild horses and burros and fish and wildlife based on the inventory data.

2. No exotic plant or animal species will be introduced on Air Force and/or ERDA controlled lands without the prior written approval of the Air Force and/or ERDA, the Service, Bureau and the Department.

3. All parties shall cooperate in carrying out management decisions and studies as required in the implementation of the resource management plan. Copies of all study data and other reports will be furnished each of the cooperators and one copy each to HQ TAC/DEEV and HQ USAF/PREV, Washington, D.C. 20330.

4. All parties will meet jointly at least annually to discuss matters relating to the management plans. The Base Commander Nellis AFB, will be responsible for calling the meeting.

5. All hunting, and trapping at the Nellis AF Range will be conducted with the concurrence of the Nellis AFB Commander or his designee; will be in accordance with existing Federal safety and security standards; and will be in accordance with Federal and State game laws, the Federal laws taking precedence in the event of a conflict.

6. In addition to State and Federal hunting licenses and stamps, a use fee for on-range hunting may be charged under the authority contained in Public Law 86-797 (16 USC 670f) at a rate determined by the installation commander and concurred in by the undersigned. These shall be accounted for by the Air Force and used exclusively for the purposes of carrying out fish and wildlife conservation aspects of the approved resource management plan which is to be developed for the Nellis AF Range.

7. The use of chemical toxicants for the control of nuisance wildlife species on Air Force and ERDA controlled lands will be in accordance with current State and Federal laws, regulations and policies.

8. Nothing in this cooperative agreement is intended to modify in any manner the present cooperative program with other public agencies, conservation groups or educational institutions, or modify any rights granted by treaty or otherwise to any Indian tribe or member thereof. All parties shall cooperate to develop a technically sound management plan for wildlife and wild horses and burros on AF and ERDA controlled lands.

9. This agreement may be modified or amended by mutual agreement by the authorized representatives of the five agencies. This agreement may be terminated in whole or in part upon provision of written notice of same by one of the signatories to the other signatories.

10. Supplemental agreements may be developed as required by any or all of the cooperators to cover other programs. This agreement does not supercede any other agreements involving the cooperators that are now in force.

11. All parties shall cooperate in controlling trespass on Air Force and ERDA controlled lands.

SECTION II. Air Force Responsibilities.

Within the limitations of the assigned military mission and the availability of funds and manpower, the Air Force agrees to:

1. Provide access to authorized agents and employees of the Service, the Bureau, the Department and ERDA in the execution of this cooperative agreement unless security or other military exigency should prevent the granting of such access.

2. Cooperate to maintain favorable habitat for species of fish and wildlife and wild horses and burros through the coordination of other land uses as identified in the approved resource management plan.

3. Cooperate to protect and preserve the habitat of threatened and endangered species.

SECTION III. Service Responsibility.

Consistent with its primary objectives and responsibilities, the Service agrees within the limitation of funds and personnel to:

1. Provide technical consulting assistance in developing fish and wildlife management programs.

2. Make available as requested the services of a Game Management Agent to aid in enforcing Federal Game Regulations.

3. Provide technical assistance in the control of nuisance species and the resolution of special problems that may arise subsequent to the execution of this working agreement.

4. Confirm the existence and habitat of any threatened or endangered species in coordination with the Department and make recommendations for protecting the same.

5. Participate in fish and wildlife census surveys.

6. Further an understanding of wildlife conservation by cooperating in related research to solve field problems and assisting in related training programs.

SECTION IV. Department Responsibilities.

Consistent with its primary objectives and responsibilities and within the availability of funds and personnel, the Department agrees to:

1. Conduct an annual fish and wildlife census to determine yearly population trends and management recommendations for restoring or maintaining resident species.

2. Adjust resident game species or make recommendations for adjustment as feasible to avoid damage to public health, safety and other resource values, and to furnish each year a statement of current state hunting season dates, and all state hunting laws and revisions.

3. Make available, wardens for the normal enforcement of state game laws on the lands controlled by the Air Force and ERDA.

SECTION V. Bureau Responsibilities

Consistent with its primary objectives and responsibilities, the Bureau agrees within the limitation of funds and personnel to:

1. Conduct an annual census of the wild horses and burros to determine yearly population trends. Take actions necessary for maintaining the wild horses and burro populations at a level determined by the management plan.

2. Conduct studies to determine the condition of the vegetative resource.

SECTION VI. ERDA Responsibilities.

Consistent with its primary objectives and responsibilities, ERDA agrees within the limitations of funds and personnel to:

1. Provide access to authorized agents and employees of the Air Force, the Bureau, the Service and the Department in execution of the management plan and cooperative agreement unless security or personal safety should prevent the granting of such access.

2. Maintain favorable habitat for species of fish and wildlife and wild horses and burros through the coordination of other land uses and accomplishment of direct habitat management improvement measures in accordance with an approved resource management plan.

3. Protect and preserve the habitat of threatened and endangered species.

Public Access:

General public access to Air Force and ERDA controlled lands is not usually authorized for any purpose due to safety and security requirements necessitated by the missions of the two agencies. However, the Resource Management Plan to be developed under the terms of this cooperative agreement, may allow limited public access. Such public access as established by the Plan will be permitted by the Air Force to the Nellis AFR only to the extent that safety and security considerations are not contravened and only when specifically authorized by local authorities of the Air Force. Public access to ERDA controlled areas is not envisioned.

APPENDIX C

SUMMARY OF AGREEMENTS
ON
NEVADA WILD HORSE RANGE

APPENDIX C

SUMMARY OF WILD HORSE AND WILDLIFE COOPERATIVE AGREEMENTS FOR THE NELLIS AIR FORCE RANGE

March 23, 1961 — MEMORANDUM OF UNDERSTANDING - U.S. AIR FORCE AND THE NEVADA STATE FISH AND GAME COMMISSION.

Agencies Involved: U.S. Air Force and Nevada State Fish and Game Commission

Purpose: To recognize the Nevada State Fish and Game Commission (NSF&GC) role in the protection and management of wildlife on the Nellis Air Force Range. It provided access for Fish and Game personnel to the Nellis Range and directed the Air Force to appoint a liaison person to work with the NSF&G.

June, 1962 — WILD HORSE MANAGEMENT AREA.

Agencies Involved: U.S. Air Force and Bureau of Land Management.

Purpose: "Because of the deep concern expressed by a large number of people in regard to preservation of wild horses and the need to manage and control their use, an area within the boundaries of the land withdrawn for the Nellis Air Force Base Nevada, has been identified as suitable wild horse area. The area is presently being used by wild or abandoned horses by their own selection. The horse use is not inconsistent with the needs of the Air Force. Identifying the area for horse use will provide an area which can be managed for the horses and their habitat. It is reliably estimated on the basis of counts by the State Fish and Game Department that more than 200 horses now run in this area. This approximate number of wild horses will be maintained as long as their use of the range remains in balance with the forage resources available." The agreement stated further, "By cooperation with Nevada State and county officials the control of the desired number of horses to use the range will be achieved." The total area involved in the agreement was 435,000 acres.

December, 1963 — COOPERATIVE PLAN FOR THE CONSERVATION AND DEVELOPMENT OF FISH AND WILDLIFE RESOURCES ON THE NELLIS AIR FORCE RANGE.

Agencies Involved: U.S. Air Force, Bureau of Sports Fisheries and Wildlife (U.S. Fish and Wildlife Service), Nevada Fish and Game Commission (Nevada Department of Wildlife), and Bureau of Land Management.

Purpose: The agreement provided for the management, development and protection of fish and wildlife resources on the Nellis Air Force Range. It included all big game species (deer, antelope, big horn sheep). It also included horses under the term wildlife and estimated the population for the wild horse range to be 200 horses.

June, 1965 — WILD HORSE MANAGEMENT AREA

Agencies Involved: U.S. Air Force and the Bureau of Land Management.

Purpose: This was a reissuance of the June 1962 agreement. The new agreement reduced the size of the wild horse management area to 394,500 acres, which was the only change.

January 15, 1969 — COOPERATIVE PLAN FOR THE CONSERVATION AND DEVELOPMENT OF FISH AND WILDLIFE RESOURCES ON THE NELLIS AIR FORCE RANGE.

Agencies Involved: U.S. Air Force, Bureau of Sports Fisheries and Wildlife (U.S. Fish and Wildlife Service), Nevada Fish and Game Commission (Nevada Department of Wildlife), and the Bureau of Land Management.

Purpose: This was a reissuance of the 1963 cooperative plan. The only change was an update of the animal numbers for the wild horse area which were as follows:

Horses - 400
Deer - 200
Antelope - 100

November 12, 1973 — COOPERATIVE AGREEMENT BETWEEN THE BUREAU OF LAND MANAGEMENT, NEVADA STATE OFFICE, AND UNITED STATES AIR FORCE, NELLIS AIR FORCE BASE.

Agencies Involved: U.S. Air Force and the Bureau of Land Management.

Purpose: Cancelled 1962 and 1965 agreements. New agreement complied with provisions of the Wild Horse and Burro Act of December 15, 1971, and 43 C.F.R. 4700, which requires BLM to enter into cooperative agreements with other agencies when wild horses use lands under their jurisdiction during all or part of the year. The agreement recognized that the horses on the Nevada Wild Horse Range were under the jurisdiction of the BLM and called for the development of a management plan for the management of the horses and their habitat.

January, 1977 — FIVE-PARTY COOPERATIVE AGREEMENT

Agencies Involved: U.S. Air Force, U.S. Fish and Wildlife Service, Department of Energy, Bureau of Land Management and Nevada Department of Wildlife.

Purpose: The agreement provided for the protection, development and management of the natural resources of fish and wildlife, vegetation, watershed, and wild horses and burros on the Nellis Air Force Range, the Nevada Test Site, and the Tonopah Test Range. The agreement calls for resource inventories and the development of a resource management plan.

APPENDIX D

NEVADA WILD HORSE RANGE
HERD AREA MANAGEMENT PLAN

APPENDIX D

NEVADA WILD HORSE RANGE HERD MANAGEMENT AREA PLAN CALIENTE RESOURCE AREA, LAS VEGAS DISTRICT

I. INTRODUCTION

Preparation of a wild horse herd management area plan designed to specifically manage the wild horses populating the Nevada Wild Horse Range consistent with the U.S. Air Force use of the area in balance with the available forage was recommended through a Cooperative Agreement between the Bureau of Land Management, Nevada State Office, and United States Air Force, Nellis Air Force Base (November 12, 1973).

The Nevada Wild Horse Range (NWHR) Herd Management Area Plan (HMAP) is designed to effectively manage the wild horse population in accordance with the Bureau of Land Management NSO Manual Supplement 4730 (November 24, 1982), and 43 CFR 4700. Effective management of the wild horse population is essential to ensure a net benefit to the valuable resources (i.e., vegetation, soils, wild horses, wildlife, etc.) which occupy the area.

The Nevada Wild Horse Range was established in 1962 by a Cooperative Agreement with the Commander, Nellis Air Force Base and the State Director, Nevada Bureau of Land Management. The NWHR was the first wild horse area established in the U.S. and was brought about in answer to pressure from across the nation by thousands of wild horse admirers. While the primary purpose of the Nellis Range Complex (NRC), a complex withdrawn from public use, is for weapons development and flight training, the existence of wild horses on the NWHR is a secondary use of the lands.

In 1971 Congress passed the Wild Horse and Burro Act and promulgated 43 C.F.R. 4700 to implement the Wild Horse and Burro Act. In 1977 a five- party agreement was developed for protecting, developing, and managing the natural resources of fish and wildlife, vegetation, watershed, and wild horses with the U.S. Air Force (USAF), U.S. Fish and Wildlife Service (USFWS), Department of Energy (DOE), Bureau of Land Management (BLM), and the Nevada Department of Wildlife (NDOW).

Wild horse population estimates in 1962 were 200 head. These horses were mainly in the area designated as the Nevada Wild Horse Range. Since 1962 the wild horses have expanded their range and roam over most of the north side of the NRC. The present population, including areas on the NRC outside of the NWHR, is 4,890 wild horses (actual count, by aerial census, March 1, 1984, Table 2, page 7). The total area of the present home range is estimated at 1,780,000 acres.

Historically NRC was grazed by livestock, wild horses, and wildlife. Even though the area was withdrawn primarily for military purposes in 1940, livestock grazing continued until 1979. Attempts were made during the fifties and sixties to discontinue livestock grazing to no avail. In 1979 a fence along the northern boundary was completed, thus eliminating livestock grazing from the area and movement in and out of the NRC by wild horses.

Nationally the NWHR is not well known and does not generate much public interest, because of its remoteness and inaccessibility. The National Wild Horse Association, a Las Vegas based organization, has shown considerable active interest and has been involved in helping develop and maintain water improvements along with the USAF.

The U.S. Air Force and the Department of Energy have on-going programs of weapons testing and training, which is the primary use of the withdrawal area. These activities require controlled access to the area because of this primary use.

This plan was developed through a Consultation and Coordination (C&C) process with various interest groups, and State and Federal Government agencies who have an interest in the well-being of wild horses and wildlife on the NRC. The C&C Committee, after visiting parts of the NRC and becoming completely familiar with the existing data, have recommended that 2,000 wild horses be managed initially on the Nevada Wild Horse Range only, with future analysis of monitoring studies to be used to determine the appropriate management number.

II. BACKGROUND INFORMATION

A. Location and Size

The Nevada Wild Horse Range is located in the northeast corner of the Nellis Range Complex (NRC) approximately 40 miles southeast of Tonopah, Nevada (see area map, Appendix 1). The Nevada Wild Horse Range is comprised of 394,000 acres. At present wild horses roam over a much larger area. The area the wild horses are presently using is shown in Appendix 1. Approximate acreage is as follows:

Wild Horse Use Area	Acres
NRC outside of NWHR	1,390,000
NWHR	394,000
NRC not known to be used by wild horses	151,000
Total NRC	1,935,000

B. Resource Data

1. Vegetative Resource

No vegetative inventory has been conducted nor is one planned. Utilization studies initiated in 1980 on the NWHR show that heavy to severe use is being made within 1/2 mile of all water facilities. Outward from waters to about 4-1/2 miles, the use is moderate to heavy.

Generally the vegetation in the NRC is composed of galleta grass, Indian ricegrass, numerous forbs, big sage, low sage, bud sage, rabbitbrush, buckwheat, desert globemallow, pinyon pine, and juniper.

2. Range Condition and Trend

Trend studies (photo plot method) were initiated in the spring of 1981 on the NWHR. Vegetative trends can only be determined after many years of data collection.

3. Soils

No intensive soil survey has been conducted.

4. Water (Appendix 1)

Water sources for the wild horses and wildlife on the NWHR consist mainly of developed springs and pipelines and natural catchment basins. Past livestock operations developed some of the springs and pipelines, but since these operations have been restricted from the NRC, these developments have deteriorated to the point that they provide water only at the source.

The BLM, with assistance from the National Wild Horse Association, USAF, and DOE are maintaining five springs; Rose Spring, Silverbow Spring, Tunnel Spring, Upper and Lower Corral Springs. Rose and Silverbow Springs developments consist of pipelines for better water distribution.

Summer and Cedar Springs, along with George's Water, are used outside of the NRC area for livestock and are maintained by
Mr. Joseph P. Fallini, Jr.

During the drier seasons wild horse use is restricted to waters within the NWHR, which don't produce adequate amounts of water for the wild horse population.

5. Animals

a. Wildlife

Mule deer are found on all mountain ranges within the area. Antelope use the foothills and the valleys. Main concentrations of antelopes are in the northern portion of Cactus Flat and all of Kawich Valley with occasional sightings around Stonewall Mountain. The desert bighorn sheep are on and around Stonewall Mountain. Mountain lions are found throughout the entire area.

Other wildlife species found in the area include a variety of raptors, such as Golden eagles and hawks, numerous small birds and small mammals, and many reptiles. Jackrabbits and cottontails are common, but population levels fluctuate periodically in high/low cycles.

There are no known threatened/endangered plant species in the identified wild horse use area. There are, however, three candidate species within the area, that are being considered for federal listing under the endangered species act. Asclepias eastwoodiana; category 2, Sclerocactus polyancistrus; category 2, and Astragalus beatleyae; category 2 (Federal Register Vol. 45, No. 242 and Vol. 48, No. 229). Astragalus beatleyae is also listed critically endangered by Nevada State Status NRS 527.270.

In addition, the bald eagle may use the area as a pass-through species.

For wildlife population estimates see Table 1 below. Little emphasis has been placed on data collection, particularly due to the controlled access to the NRC because of its primary use.

TABLE I

WILDLIFE POPULATION ESTIMATES*

Species	Location	Number
Desert Bighorn Sheep	Stonewall Mountain	50-75
Pronghorn	Overall	200
Mule Deer	Stonewall Mountain	50
	Kawich Range	50
	Belted Range	35
Chukar Partridge	Stonewall Mountain	400-500
	Belted Range	150
	Kawich Range	600
Mountain Lion	Stonewall Mountain	3
	Belted Range	2
	Kawich Range	5

*Estimates are not based on definitive inventory information.

b. Livestock

Livestock are no longer licensed to graze this area and only an occasional livestock trespass occurs.

c. Wild Horses

1) Present Situation

a)Population Size

Little emphasis has been placed on data collection, particularly due to the controlled access to the NRC because of its primary use.

The BLM and USAF have been conducting aerial horse inventories since 1976. Inventory results are disclosed in Table 2 below.

TABLE 2

WILD HORSE AND BURRO INVENTORY

DATE	LOCATION	CENSUS/TYPE		HORSES	BURROS
1963	Nevada Wild Horse Range	(Estimate)		200	0
			Total	200	
November, 1973	NWHR	Ground		800	0
			Total	800	
March, 1976	Kawich Valley	Aerial		114	0
	Gold Flat & Cactus Flat			950	0
			Total	1,064	
May, 1977	Overall	Aerial		1,300	0
			Total	1,300	
April, 1980	Stonewall	Aerial		341	33
	Goldfield	Aerial		225	36
	Cactus Flat & Kawich Valley & Belted Range	Aerial		2,556	0
			Total	3,122	69
June, 1982	Stonewall Mountain	Aerial		574	113
	Goldfield/Mud Lake	Aerial		314	82
	Cactus Flat and Cactus Range	Aerial		2,756	0
	Kawich Valley & Range	Aerial		401	0
			Total	4,405	195
August, 1983	Stonewall Mountain	Aerial		604	49
	Goldfield/Mud Lake	Aerial		144	32
	Cactus Flat and Goldflat	Aerial		3,138	0
	(Areas A/C Incomplete)			283	0
	Kawich Range/Valley	Aerial		691	0
			Total	4,860	81
March, 1984	Stonewall (Top of Mountain not Inventoried)	Aerial		543	58
	Goldfield/Mud Lake	Aerial		284	60
	Cactus/Gold Flat (Area A not Inventoried)	Aerial		3,363	0
	Kawich	Aerial		700	0
			Total	4,890	118

Aerial Censuses invariably undercount total number of wild horses per given area. There has been no correction factor developed for this area.

Thus, total count data secured on the Nellis Range Complex is presumably below the actual population size. In addition, due to time allotted and security restrictions total use areas are not always flown resulting in less consistent data.

b)Color

Horse colors vary from white to black and all shades in between. However, the predominant colors are bay, brown and sorrel with a few pintos in the Stonewall Mountain Area. In addition, certain areas are developing certain colors; such as palominos, duns and buckskins in North Cactus Flat east of Mud Lake, and grays and roans in the Kawich Valley Area.

c)Gatherings

One minor gathering operation has been conducted on the NRC. This gathering occurred in the spring of 1984 and five head of wild horses were gathered from the Stonewall Mountain Area. The animals were subsequently relocated in the Caliente Resource Area as part of the study.

d)Condition

Generally animals appear to be in fair to good condition. The population as a whole appear to be healthy with isolated maladies afflicting some animals. Lack of sufficient water during the summer does stress the population especially during very dry periods.

e)Cover

The main source of cover is provided by the pinyon- juniper on the mountain slopes. Some cover is provided by the canyons and rocky outcrops along the foothills.

f)Seasonable Use and Home Range

A comprehensive study has never been performed to determine the seasonal use patterns and home ranges of wild horse bands inhabiting the management area. Identification of major use areas, however, was accomplished (Appendix 1). Accurate knowledge pertaining to wild horse movement patterns is important in order to understand animal/ vegetation interrelationships. The limited information obtained thus far shows the horses tend to concentrate in the areas close to the water source during the summer months. Most of these areas are along the upper portions of the piedmont slope. During the colder months, the horses use a much larger area extending 15-25 miles from known water sources.

Four wild horse use areas have been identified in the area, Kawich, Stonewall, Goldfield Hills, and Cactus Flat/Goldflat, Horses in the Stonewall home range seldom mix with the other three home ranges. Animals in the Cactus Flat/Goldflat home ranges and Goldfield home ranges do intermix (especially during the winter months near the Mud Lake Area) as do animals in the Cactus Flat/Goldflat and Kawich home ranges.

d. Burros

Burros do exist west of the Stonewall Mountain and the Goldfield Range. Present population (actual count) 1984 are:

Stonewall Mountain - 58 burros
Goldfield Range - 60 burros

Most of the burros are west of the Stonewall Mountains off the Range Complex, but they do occasionally migrate onto the range. The burros that migrate onto the NRC during construction of the west boundary fence will be removed from the NRC. There are no burros on the NWHR.

The animals appear to be in good physical condition.

6. Population Demography

There is no data for sex ratio, age structure, or mortality. Rate of increase based on limited data as calculated from one year's census is approximately nine percent. Effective management of wild populations is contingent on the acquisition and accurate interpretation of reliable sex and age data. Management of wild horse populations is no exception. Sex and age information secured through capture operations is a reliable technique utilized by the Bureau of Land Management to analyze population processes for management purposes. Thus far, there have been no significant capture operations within the NRC. Analysis needs for the Nevada Wild Horse Range Herd Management Area population are: sex ratio, age structure, productivity, and mortality or conversely survival.

C. Existing Projects (Appendix 1)

1. Water

Water projects consist of three spring developments with troughs at the source (Tunnel Spring, Upper, and Lower Corral Spring) and two spring developments with a pipeline distribution system (Rose Spring and Silverbow Spring). These projects are maintained by the BLM with assistance from USAF, DOE, and the National Wild Horse Association.

Water projects left over from past livestock operations have deteriorated and are in need of repair. The pipeline projects are no longer functional and provide water only at the spring source. There are also several springs and silted in reservoirs that need maintenance or development to function better for wild horses and wildlife.

2. Fence

The northern boundary fence of the Nellis Range Complex was constructed between 1977-1979 to restrict cattle movement onto the range. The west boundary fence will be constructed in FY
1985, and will have the effect of eliminating wild horse and burro movement on the west side. There are no interior fences except for enclosures.

D. Coordination

1. Relationship to Other Resource Use

a. Wild Horse - Wildlife

Present estimate of big game are 50 to 75 Desert Bighorn Sheep, 200 antelope, and 135 mule deer.
In the Stonewall use area where a bighorn sheep population exists, the wild horses are making heavy demands on the water and forage resources. Even the highest mountain peaks show sign of horse use as indicated by the extensive trails.

The Cactus Flat/Gold Flat area has approximately 120 head of antelope, with additional antelope use in Kawich Valley.

The resident herd of mule deer is very small in number at the present. One hundred and thirty-five deer are estimated in the area on a seasonal basis mainly from a migratory herd.

Continued heavy use of forage by horses may result in reduced productivity of bighorn sheep, antelope, mule deer, and other wildlife species in the area. Should the heavy forage utilization by horses continue, a demise of native big game species could occur in the area.

b. Wild Horse - U.S. Air Force and Department of Energy

The U.S. Air Force has used the NWHR and surrounding area as a military training area for the past forty years which is a primary use of the withdrawn area. Sandia National Laboratories, through a contract with DOE, has used the northern portion of the Range Complex for military weapons test and development for more than ten years. These agency's activities are expected to increase with time. Although their impacts upon the wild horse population is unknown at this time, conflicts such as wild horse-vehicle collisions are likely to increase.

2. Cooperation in Management

Various state and federal agencies are involved in uses of the NRC and particularly the NWHR. Hence, a series of cooperative agreements have involved that affect the management of the resources. Therefore, included is a summary of cooperative agreements (Appendix 2) that affect wild horse management on the NRC.

3. Management Number

Through successive meetings and field trips the C&C Committee members recommended an initial management number of 2,000 head of wild horses to be managed on the NWHR only. Future management numbers will be determined through subsequent analysis of monitoring data.

OBJECTIVES

The overall objectives are to maintain and manage populations of wild, free-roaming horses on the NWHR as recognized components secondary only to the primary uses the area was withdrawn for. These horses are to be managed in conformity with the goals established in the Wild Horse and Burro Act.

A. Habitat Objective

1. Determine key areas and key forage plant species for wild horses within one year.

2. Allow utilization of key forage plant species by horses to exceed the allowable use factor, by no more than ten percent on the NWHR as established by the Nevada Range Monitoring Task Group (1984).
3. Maintain a static to upward apparent trend in vegetation characteristics through control of grazing pressure.

4. Minimize incidence of wild horses being unable to obtain sufficient drinking water at specific water sources.

B. Population Objectives

1. Monitor the physical condition of wild horses and maintain animals in fair to good condition.

2. Acquire additional data on wild horses to better understand the forces that affect wild horse populations.

3. Determine wild horse seasonal movement and distribution patterns within the next five years.

4. Enhance the gray and roan color marking in the Kawich Valley Area and palomino, dun and buckskin in Cactus Flat and Gold Flat Areas.

5. Preserve 10 head of pintos from the Stonewall Mountain Area by relocating them in appropriate HMA.

6. Manage wild horses on the NRC with the objective to maintain the home range wholly within the NWHR.

IV. MANAGEMENT METHODS

Studies and assessment will be conducted based on controlled access and the primary use of the NRC.

A. Habitat Management Methods

1. Determine key areas and key forage species for wild horses. Within one year key areas and key species will be selected using the Nevada Range Monitoring Task Force Procedures. Within six years, these key areas and key species will be evaluated through field observations and study analysis to determine which key areas and key forage plant species to continue to monitor. Criteria for selection of key areas will be that they provide a significant amount of the available forage and be selected only after a careful evaluation of the current pattern of grazing by the wild horses has been determined. Key areas will be selected in a homogeneous vegetation type and contain the key species or have the potential to produce the key species to be monitored. Areas removed from water or having limited accessibility should not be considered as key management areas but may be suitable for comparison areas.

Key forage plant species should be palatable to the wild horses during the season of use. Key species should provide more than 15 percent of the available forage in the grazing area or have the potential for greater production if it is critical to the needs of the wild horses. The key species must be a perennial forage plant; and be consistent with management objectives for the plant community.

The following types of studies may be conducted at each key area: Utilization, frequency, ground cover, climate, and apparent trend studies.

Within six years, all key areas and key species will be evaluated to determine their effectiveness in reflecting the current management of the HMA.

2. Allow utilization of key forage plant species to exceed allowable use factors by no more than ten percent on the NWHR as presented in the Nevada Range Monitoring Handbook (First Edition, 1984) and BLM Manual 4412.

Allowable use factors as established by the Nevada Range Studies Task Group are:

Plant Category	Spring	Summer	Fall	Winter	Yearlong
Perennial Grasses and Grasslike	50%	50%	60%	60%	55%
Shrubs, Half Shrubs and Trees	30%	50%	50%	50%	45%

If utilization levels exceed the allowable use factors by 10% then wild horses will be removed down to a level that would provide use at 10% less than the allowable use factors. Removals of wild horses would be based on analysis of all monitoring studies. Adjustments in grazing pressure would be made either HMA wide or from smaller use areas depending on results of monitoring studies.

Therefore, apparent trend will be determined, either upward or downward, using indicators of soil trend and indicators of trend in vegetation. Methodology for determining apparent trend will be as established by the Nevada Range Monitoring Task Group (Nevada Rangeland Monitoring Handbook, First Edition, 1984).

3. Maintain a static to upward apparent trend in vegetation characteristics by maintaining wild horses numbers at a compatible level with the vegetation resource. Apparent trend refers to one time observations of soil and vegetative conditions on rangelands. It is used in the absence of sufficient data to determine apparent trend.

Range sites have not been determined for the NWHR which limits the degree of monitoring to be accomplished.

4. Minimize incidence of wild horses being unable to obtain sufficient drinking water at specific water sources. This can be accomplished by adjusting the number of wild horses utilizing water sources which produce less water in a 24-hour period than required by the number of animals attempting to drink at that source during the same period to a level which provides 10 gallons of water per day for each animal.

Initially water sources need to be brought back into functional condition with adequate water storage, with annual maintenance thereafter.

Water sources needing minor repairs to major reconstruction and development are ranked by priority based on numbers of horses using area. Starting with highest priority they are as follows: Cedar Wells -- develop with storage and troughs; Upper and Lower Corral Springs -- reconstruction, add new troughs and storage; Silverbow pipeline -- repair, add new troughs storage and consider extending pipeline. Rose Spring pipeline -- add storage and consider pipeline extension; Tunnel Spring -- add storage; Cedar Spring -- develop with storage. Development of additional springs will be considered only through consultation with the five-party cooperators.

Completion of repairs and/or reconstruction is dependent upon feasibility and funding. Initially certain projects will be proposed in FY 1985 for funding and access to the NRC based on its primary use. Additional projects will be proposed every year until all projects are working.

Water sources will be monitored yearly to determine if adequate water is available for horses using the area. If not, the horses will be removed from that area and either relocated or put up for adoption.

B. Population Management Methods

1. Monitor the physical condition of wild horses and maintain animals in fair to good condition. Maintenance of animals in fair to good condition can be obtained by maintaining wild horses at the appropriate numbers as determined through analysis of monitoring data. Condition of wild horses will be observed when in the field and during the collection of other population data as described in the studies section.

2. Acquire additional data on wild horses to better understand the forces that affect wild horse populations. Studies to collect information relative to sex ratios, age structure, young/adult ratios, average band size will be established on wild horse population within the NWHR. All studies will be correlated with capture data, aerial census data and vegetation monitoring data. For more details on studies see studies and assessment section.

3. Determine wild horse seasonal movement and distribution patterns within the next five years. Seasonal movement and distribution patterns will be observed four times per year, during each season. Studies as described in studies section will be completed during censuses or field observations. Seasonal movement and distribution patterns will be correlated with vegetation monitoring data to aid in developing a better monitoring program for NWHR. Seasonal movement and distribution patterns should show to what extent the wild horses will remain on the NWHR once this plan is fully implemented.

4. Enhance the gray and roan color markings in the Kawich Valley Area and Palomino, buckskin, and dun in the Cactus Flat/Goldflat Areas. Enhancement of color markings in specified areas will be accomplished by selective retention of those animals during removal operations. The initial wild horse adjustment will not be concerned with selective removal concerning color except for preserving a portion of the pinto population from Stonewall Mountain. After the initial adjustment to 2,000 head, enhancement of color will be considered to aid in maintaining the unique development of certain colors.

5. Stonewall Mountain use area is identified for complete removal of wild horses and burros. Therefore preserve 10 head of Pintos from the Stonewall Mountain Area by relocating them during the Stonewall capture operation to an appropriate HMA.

Specifics concerning capture will be addressed in capture plans. Although this is not a major objective of this plan it is a major goal of wild horse management within the Caliente Resource Area.

6. Manage wild horses on the NRC with the objective to maintain the home range wholly within the NWHR. Correlation of all monitoring studies will be used to determine the effectiveness of maintaining horses on the NWHR. Realizing wild horses will not remain totally on the NWHR under this plan, horses will be allowed to roam off the NWHR using ephemeral waters, providing use occurs only on a

seasonal basis. If wild horses are determined to be using areas outside of the NWHR on a permanent basis then management actions will be initiated to alleviate problems or remove the wild horses.

C. Population Adjustment

Population adjustments will be conducted only when range monitoring studies demonstrate a need. Adjustments will be based on the utilization of key forage species. A basic utilization -- population size formula will be employed for calculation of necessary adjustment as follows:

$$x = \frac{\text{(Desired Population Size)}}{\text{Desired Utilization}} = \frac{\text{Present Population Size}}{\text{Present Utilization}}$$

All population reductions will be in accordance with guidelines established by the NWHR Gathering Plan, covering the NRC area, and 43 C.F.R. 4740.

V. STUDIES AND ASSESSMENT

Studies and assessment will be conducted based on controlled access and the primary use of the NRC. Bureau of Land Management will be responsible for installing and reading of monitoring studies.

A. Habitat

1. Key Areas and Key Specials

Key areas and key forage plant species will be selected within one year using the methodology as described by the Nevada Range Studies Task Group (Nevada Rangeland Monitoring Handbook, First Edition, 1984). Seasonal movement and distribution patterns of wild horses will be taken into consideration in selecting key areas. Monitoring studies will be conducted in key areas every year, although the types of studies may vary every three years.

2. Utilization

The key forage plant method is the utilization technique adopted for this management plan. Section 4423.33B7C of the Bureau of Land Management Manual and the Range Studies Task Group (1984) describes this particular method adequately. Utilization transects will be conducted in the spring every year prior to start green up of key species in key management areas. Data will be reserved with apparent trend information.

3. Apparent Trend

Apparent trend will be recorded on each key area selected and recorded at approximately the same time each year. Apparent trend will be recorded every year for the first three years. Thereafter, apparent trend will be recorded every three years. Information obtained will be used to supplement other resource data to determine after analysis, management direction concerning wild horse management. The methodology used to determine apparent trend will be as established by the Nevada Range Monitoring Task Group (Nevada Rangeland Monitoring Handbook, First Edition, 1984). The data collected and plot locations will be reserved in the HMA files located in the Caliente Resource Area, Bureau of Land Management Office.

4. Water Sources

Water sources will be monitored monthly during dry periods when horses consume more water to determine that there is an adequate supply for horses using the area.

5. Actual Use

Wild horse actual use estimates will be obtained from aerial census conducted by the Caliente Resources Area Wild Horse and Burro Specialist at a minimum of once every three years in accordance with Nevada State Office Manual Supplement 4730. Census to be conducted in late June or early July. It will require 15 hours of helicopter time to complete each census, pending access to the NRC, based on its primary use. Data will be reserved with trend utilization information.

B. Wild Horses

1. Condition

Physical condition of wild horses will be determined concurrent with collecting other population studies, and general observation will be made while in the field.

2. Productivity and Survival

Information on young/adult classification will be collected when funding is available, but should be gathered at a minimum of every three years. The survey should be conducted in July and again the following January. Aerial survey will be the preferred method used to collect data. However, data could be obtained from ground observations. Additional information should be collected during the survey that would enhance data already contained in the resource files concerning other characteristics of the population (i.e., color, condition, band size, actual count, home ranges, and seasonal movement patterns, etc.).

3. Sex Ratio Determination

Classification of captured animals -- sex determination will be conducted on all horses captured during gathering operations.

Field observation -- a spotting scope positioned at strategic locations (water sources, trails, natural salt licks, etc.) will be employed to obtain sex ratio information where possible. Sex ratio should be determined every three years. Studies should be conducted in June or July. Unless all animals in a band can be classified, the data will not be used.

4. Age Structure Evaluation

Relative age structure of the NWHR HMA population will be periodically evaluated from age data collected as a result of gathering operations.

5. Home Ranges and Seasonal Movement Patterns

A comprehensive study will be conducted to secure information on home ranges and seasonal movement patterns. This information is essential to supplement utilization studies. Considering the present situation regarding the size and topography of the HMA and the number of wild horses, a study could be conducted with limited funding and access to the NRC based on its primary use as follows:

Phase 1 -- October, January, April, July

Objective: Determine seasonal movement patterns and home range establishment.

Preferred Method: Aerial observations conducted seasonally (fall, winter, spring, and summer), with sighting locations plotted on a map.

Alternate Method: On the ground observations from vehicle conducted seasonally (fall, winter, spring, and summer), with sighting locations plotted on a map.

Phase 2 -- Evaluation of information acquired through field work.

In addition, information regarding other population characteristics and population dynamics would be gathered at this time (i.e., color, condition, band size, age classes, sex ratio, etc.). This additional information would require use of a spotting scope positioned at strategic locations.

6. Color

Color data for wild horses will be determine concurrent with collecting other population studies.

7. Relocation

The relocation of wild horses within the herd management area may be undertaken on a limited basis to meet management objectives. Relocation is a tool that has utility in maintaining vigor in herds and in enhancing selected characteristics which are managed in a population.

VI. MODIFICATION

Implementation of this plan will result in the first effort at managing wild horses. This plan will be modified as new data and evaluation deem necessary. Any modification of this plan will require public input into the planning process.

APPENDIX E

FIRE MANAGEMENT
MEMORANDUM OF UNDERSTANDING

APPENDIX E

Memorandum of Understanding
Between
U.S. Department of Energy
U.S. Department of Interior, Bureau of Land Management
and
Tactical Fighter Weapons Center (TFWC), Nellis AFB, NV

1. PURPOSE: This agreement establishes the basic procedures and responsibilities for fire prevention, reporting, and fire suppression and fire management on BLM Lands, the Nevada Test Site, and the Tactical Fighter Weapons Center Ranges.

2. AUTHORITY: The authority for this agreement is Public Law 99-606 (attached).

3. TERMS OF AGREEMENT:

This agreement shall become effective upon signature by all parties. It shall continue in effect until terminated by one party giving 180-day advance notice to the other parties.

This agreement may be modified by written amendment when endorsed by all affected parties.

Each party waives all claims against all other parties for compensation for personal injury or death occurring as a consequence of the fire suppression activities performed under this agreement.

Personnel and equipment may be withdrawn from a fire to combat higher priority fires (as determined by mutual agreement).

This agreement shall not affect the rights of any party to recover suppression costs and/or damages sustained as a result of the negligent or willful act of any person causing a fire.

Reimbursement cost to another party will be in accordance with Para 6 of this Agreement.

This agreement does not supersede or replace any separate agreement between the Department of Energy (DOE), Nevada Test Site, and the Bureau of Land Management (BLM).

4. DEFINITIONS:

a. BLM Lands. Lands administered and/or protected by BLM. These lands constitute BLM's jurisdictional area.

b. NTS. Lands administered and/or protected by the DOE. These lands constitute DOE's jurisdictional area.

c. TFWC Ranges. Lands administered and/or protected by the USAF through TFWC, Nellis AFB, NV. These lands constitute TFWC's jurisdictional area.

d. Supporting Agency. The party furnishing requested assistance or support to another party.

5. RESPONSIBILITY OF THE PARTIES:

BLM will:

Provide annual training for Range Group/range contractor personnel for procedures to presuppress fires.

Compute fire hazard levels and make recommendations (i.e., recommend restricted use of flares) based on potential hazards.

Maintain a portable retardant plant at ISAFAF. This is a fully portable retardant, hamp mixing system used primarily to mix retardant and load into fixed wing aircraft. The system will mix and load retardant at 15,000 gal. per hour. It has a portable water tanker, a loading manifold, loading hoses, and a pilot-crew ready room/office building. Retardant produced by this plant will be made available for fire suppression activities on BLM lands, NTS, and TFWC Ranges. The plant location will be in an area which will not conflict with operational activity. Location to be determined by ISAFAF Commander.

Station an engine and three-person fire crew at ISAFAF for quicker access to Nellis Ranges. The fire crew will be made available to the ISAFAF Commander or his designee for the purpose of supporting designated base facility projects on a non-interference basis. When available the crew will augment the ISAFAF fire department in fighting on base/off base fires.

Maintain interior and exterior of mobile home PB6 as directed by ISAFAF installation commander or base civil engineers along with grounds immediately surrounding building (within 50 feet of facility). PB6 may be used as long as it remains excess to AF needs. With 30 days' advance notice, the AF may regain possession.

Have all airborne and ground fire fighting activities under the operational control of Blackjack, when operational. (Nellis Combined Operations Center will provide operational control when Blackjack is not available.)

Adhere to the following guidelines when aircraft are under operational control of Blackjack (UHF 377.8):

All airborne and ground parties will check in and check out of the fire fighting arena with Blackjack.

All vectors and altitude information will be advisory, and aircraft must be VFR while under Blackjack. If IFR service is needed, contact Nellis Control on UHF. Nellis Control can also be contacted at 652-4222 if necessary for coordination purposes.

When entering TFWC airspace, advise Blackjack if jumpers will be used. Upon arrival at the site of the fire, permission must be obtained from Blackjack before jumpers vacate the aircraft.

UHF frequency 377.8 will be used for operational control of fire fighting activities. Under no circumstances will comments concerning Air Force equipment or structures be made over the radio unless they are directly related to the fire.

Blackjack can be reached at (Commercial) 652-3707/3705/3778.

TFWC (Range Group) will:

Ensure that road access is available for retardant bin delivery by semi- trailer. When possible, ensure that suitable water is available for the retardant plant at a minimum rate of 250 GPM US and that a 50'x60' area is available adjacent to the aircraft loading pad and water supply.

Report range conditions, on a weekly basis, to BLM for computation of potential fire hazards. Reports will be made to 646-4485 or 388-6408/9.
Request, when needed, firefighting assistance from the BLM. Requests will be made through Blackjack, with notification to TFWC Safety. Action may or may not be taken after assessment of the situation by BLM. POC at BLM is the BLM fire desk, 646-2211 or radio DOJ 450.

Obtain airspace clearance for BLM air tankers, smoke jumpers and/or helicopters through Blackjack or through the Nellis Combined Operations Center, 652-2446, if Blackjack is non-operational. Units operating out of Indian Springs AFAF can coordinate directly with Blackjack.

Make available for use, during normal operating hours, the dining hall at ISAFAF for firefighting personnel. Payment will be made on a per-person basis or reimbursement will be made monthly. POC at BLM will be Dick at 388- 6463.

Provide a facility at ISAFAF (PB6) to house BLM firefighters. This facility will be provided at no cost to BLM. Net identifiable cost of utilities may be charged to BLM. When reductions in levels of support result from reduced availability of energy resources, TFWC will allocate/apportion available resources among organic and BLM consuming activities on a proportional basis taking into account the relative mission priorities.

Provide, when possible, aircraft landing approval for BLM at ISAFAF on a PPR (prior permission requested) basis per DOD IFR Supplemental procedures. Preliminary approval must first be obtained by application and approval from USAF/PAXJ IAW AFR 55-20. BLM aircraft will abide by all rules and limitations concerning the restricted airspace, and will operate under appropriate FAR Part 91 regulations. Emergency aircraft can be provided immediate landing direction by either Nellis Control or Blackjack.

DOE will:

Establish and maintain a central point of contact for requests for range entry/access to combat fires. Points of contact are as follows:

DURING NORMAL DUTY HOURS 0800-1630 contact the following in order listed:

1. Nevada Test Site Officer (NTSO): COMM: 295-9060

   FTS: 575-9060

2. NTS Operations Control Center: COMM: 295-4015

   FTS: 575-4015

DURING NON-DUTY HOURS, WEEKENDS AND HOLIDAYS:

1. a. Emergency Duty Officer (EDO): COMM: 295-7893

   FTS: 575-7893

   b. EDO through Station 900 Net Control: COMM: 295-3570

   FTS: 575-3570

All Parties will:

When requesting assistance from another agency, provide (when possible) the following information:

(1) Number of personnel and type and amount of equipment needed.

(2) Name and location of supervisor to whom the personnel and equipment shall report.

(3) Special information/instructions (route of travel, security clearance required, food and water availability, management considerations).

Accept responsibility for equipment borrowed from the other party/parties. Equipment shall be returned in the same condition as when received, fair wear and tear excepted. Damage in excess of fair wear and tear will be repaired; lost or destroyed items will be replaced.

Make their records and accounts of the fires accessible to the applicable party during ordinary business hours. For BLM, this is the Denver Service Center; for DOE, the Finance Division of the Nevada Operations Office; for the USAF, the Accounting and Finance Office, Nellis AFB, NV.

Coordinate with other parties, as applicable for planned fire management activities (constructing fire breaks, controlled burning, etc.).

Assist in presuppression, when equipment and personnel resources permit, at no expense to the other parties unless otherwise provided.

Immediately notify the appropriate party or parties when a fire is observed/suspected on another party's lands or the adjoining land. Point of contact for TFWC Ranges is 554th Range Group/Blackjack, 642-3707; for DOE, contact Blackjack at 652-3705; for BLM, Las Vegas Dispatch, 646-2211. Notification will include location, approximate size, possible origin, direction of fire spread, and climatic conditions.

Exchange available weather data. On project size fires, BLM will provide a mobile weather station, resources permitting.

6. FUNDING AND REIMBURSEMENT:

Reimbursement/payment will be made to the supporting agency for all net identifiable costs of support provided when fires are NOT naturally occurring. No agency shall attempt to gain reimbursement for fighting naturally occurring fires. Any fire occurring within a two-week period following a lightning storm will be considered naturally occurring unless known to be otherwise (cause is known, BLM investigator has determined cause). Payment is the responsibility of the agency whose activities caused the fire.

Net Identifiable Costs Include:

a. Labor, both military and civilian, regular and overtime, including fringe benefits.

b. Travel costs for personnel assigned to the fire.

c. Charges for equipment used on the fire (owned or under contract), including repair/replacement.

d. Supplies. Necessary materials, fuels, etc.

e. Provisions. Food and beverages consumed by firefighters during and immediately after firefighting activities.

The agency providing assistance will submit an itemized billing for services provided within 120 calendar days after the date the fire is declared out. Payment shall be made to the supporting agency within 60 calendar days after receipt of final billing. If an agency is unable to meet the billing and/or payment schedules set forth above, an extension will be promptly requested in writing stating the reason for its inability to comply.

APPENDIX F

PREDOMINANT ANIMAL SPECIES OF NELLIS AIR FORCE RANGE

APPENDIX F

PREDOMINANT ANIMAL SPECIES EXPECTED ON THE RP AREA

Predominant Species	Vegetative Communities			
	Saltbush	Mixed Majave and/or Blackbrush	Sagebrush	Pinyon Juniper and/or Higher Elevation Communities
AMPHIBIANS				
Great Basin spadefoot toad (Scaphiopus intermountanus)				(X)
Western Toad (Bufo boreas)	(X)	(X)	(X)	(X)
REPTILES				
Desert Tortoise (Gopherus agassizii)		Creosote-bursage, below 4000 ft.		
Lizards				
Zebra tailed lizard (Callisauras draconodes))	(X)	(X)		
Desert collared lizard (Crotophytus isularis)	(X)	(X)	(X)	
Desert horned lizard (Phrynosoma platyrhinos)	(X)	(X)	(X)	
Sagebrush lizard (Sceloperus graciosus)	(X)		(X)	(X)
Western fence lizard (Sceloperous occidentalis)	(X)	(X)	(X)	(X)
Side blotched lizard (Uta stansburiana)	(X)	(X)	(X)	(X)
Western whiptailed lizard (Cnemodophorus tigris)	(X)	(X)	(X)	(X)
Snakes				
Coachwhip--red racer (Masticophis flagellum)	(X)	(X)		
Striped Whipsnake (Masticophis teainiatus)	(X)	(X)	(X)	
Great Basin gopher snake (Pithuophis melanoeucus)	(X)	(X)	(X)	(X)
Western patch-nosed snake (Salvadora hexalepis)	(X)	(X)	(X)	
Sidewinder (Crotalus cerastes)	(X)	(X)		

PREDOMINANT ANIMAL SPECIES EXPECTED ON THE RP AREA (Continued)

Predominant Species	Vegetative Communities			
	Saltbush	Mixed Majave and/or Blackbrush	Sagebrush	Pinyon Juniper and/or Higher Elevation Communities
Western Rattlesnake (Crotalus viridis)	(X)	(X)	(X)	(X)
BIRDS				
Sage sparrow (Amphispiza billi)	(X)	(X)	(X)	
Black-throated sparrow (Amphispiza bilineata)	(X)	(X)	(X)	(X)
House finch (Carpodacus mexicanus)	(X)	(X)	(X)	(X)
Bush tit (Psaltriparus minimus)				(X)
Cliff swallow (Petrochelidon pyrrhonota)	(X)	(X)	(X)	(X)
Ash-throated fly catcher (Mylarchus cinerascens)	(X)	(X)		
Western meadowlark (Sturnella neglecta)	(X)			(X)
Horned lark (Eromophila alpestris)	(X)	(X)		(X)
Loggerhead shrike (Lanius ludovicianus)	(X)	(X)		(X)
Western Kingbird (Tyrannus verticularis)	(X)	(X)	(X)	(X)
Common flicker (Colaptes auratus)	(X)	(X)	(X)	
Brown headed cowbird (Molothrus ater)			(X)	(X)
Rufus-sided towhee (Pipilo erythrophtalmus)			(X)	(X)
Pinyon jay (Gymnorphinus cyanocephalus)			(X)	(X)
Gambel's quail (Lophortyx gambeli)	(X)	(X)	(X)	
Chukar partridge (Alectoris gracea)	(X)	(X)	(X)	

PREDOMINANT ANIMAL SPECIES EXPECTED ON THE RP AREA (Continued)

Predominant Species	Vegetative Communities			
	Saltbush	Mixed Majave and/or Blackbrush	Sagebrush	Pinyon Juniper and/or Higher Elevation Communities
Mourning dove (Zenaida macroura)	(X)	(X)	(X)	(X)
Common raven (Corvus corax)	(X)	(X)	(X)	(X)
Sharp-tailed hawk (Accipiter striatus)	(X)	(X)	(X)	(X)
Long-billed curlew (Numenius americanus)	(X)	(X)	(X)	
Peregrine falcon (Falco peregrinus)	(X)	(X)	(X)	(X)
White-faced ibis (Plegadis chihi)	(X)	(X)	(X)	(X)
Swainson's hawk (Buteo swainsoni)	(X)	(X)	(X)	(X)
Mountain plover (Charadrius montanus)	(X)	(X)	(X)	
Western snowy plover (Charadrius alexandrius nivosos)	(X)	(X)	(X)	
Cooper's hawk (Accipiter cooperii)	(X)	(X)	(X)	(X)
Red-tailed hawk (Buteo jamaicensis)	(X)	(X)	(X)	(X)
Golden eagle (Aquila chrysaetos)	(X)	(X)	(X)	(X)
Turkey vulture (Cathartes aura)	(X)	(X)	(X)	(X)
Great horned owl (Bubo virginianus)	(X)	(X)	(X)	(X)
MAMMALS				
Shrews				
Merriam's shrew (Sorex merriami)	(X)	(X)	(X)	

PREDOMINANT ANIMAL SPECIES EXPECTED ON THE RP AREA (Continued)

Predominant Species	Vegetative Communities: Saltbush	Mixed Majave and/or Blackbrush	Sagebrush	Pinyon Juniper and/or Higher Elevation Communities
Bats				
Little brown myotis (Myotis lucifugus)	(X)	(X)	(X)	
Big brown bat (Eptesicus fuscus)	(X)	(X)	(X)	(X)
Townsend's big-eared bat (Plecotus townsendii)				(X)
Brazilian free-tailed bat (Tadaria braziliensis)	(X)	(X)	(X)	(X)
Rabbits and Hares				
Desert cottontail (Sylvilagus audubonii)	(X)	(X)	(X)	
Black-tailed jackrabbit (Lepus californicus)	(X)	(X)	(X)	(X)
Rodents				
White-tailed antelope ground squirrel (Ammospermophilus leucurus)	(X)	(X)	(X)	
Townsend's ground squirrel (Spermophilus townsendii)			(X)	(X)
Botta's pocket gopher (Thomomys bottae)	(X)	(X)	(X)	(X)
Great basin pocket mouse (Perognathus parvus)			(X)	(X)
Dark kangaroo mouse (Macrodipodops megacephalus)	(X)	(X)		
Pale kangaroo mouse (Macrodipodops pallidus)	(X)	(X)		
Ord's kangaroo rat (Dipodomys ordii)	(X)		(X)	
Chisel-toothed kangaroo rat (Dipodomys microps)	(X)		(X)	(X)
Merriam's kangaroo rat (Dipodomys merriamii)	(X)	(X)	(X)	
Harvest mouse (Reithrodontomys megalotus)	(X)	(X)	(X)	

PREDOMINANT ANIMAL SPECIES EXPECTED ON THE RP AREA (Continued)

Predominant Species	Vegetative Communities			
	Saltbush	Mixed Majave and/or Blackbrush	Sagebrush	Pinyon Juniper and/or Higher Elevation Communities
Deer mouse (Peromyscus maniculatus)	(X)	(X)	(X)	(X)
Pinyon mouse (Peromyscus truii)				(X)
Desert wood rat (Neotoma lepida)			(X)	(X)
Sagebrush vole (Lagurus curtatus)			(X)	
Carnivora				
Coyote (Canis latrans)	(X)	(X)	(X)	(X)
Kit fox (Vulpes macrotis)	(X)	(X)	(X)	
Badger (Taxidea taxus)	(X)	(X)	(X)	(X)
Striped skunk (Mephitis mephitis)	(X)	(X)	(X)	(X)
Bob cat (Lynx rufus)	(X)	(X)	(X)	(X)
Mountain lion (Felis concolor)	(X)	(X)	(X)	(X)
Hoofed Mammals				
Mule deer (Odocoileus hemionus)	(X)	(X)	(X)	(X)
Pronghorn antelope (Antilocapra americana)	(X)	(X)	(X)	(X)
Desert Bighorn Sheep (Ovis canadensis nelsoni)	(X)	(X)	(X)	(X)
Horses (Equus caballus)	(X)	(X)	(X)	(X)
Burros (Equus asinus)	(X)	(X)	(X)	(X)

APPENDIX G

SPECIAL STATUS SPECIES LIST

APPENDIX G

SPECIAL STATUS SPECIES ON THE NELLIS AIR FORCE RANGE

Candidate and Sensitive Plant Species for the Nellis Air Force Range

Species	Federal Status	Number Key
Astragalus beatleyae	1	1
Astragalus gilmanii	2	2
Lathyrus hitchcockianus	2	3
Penstemon arenarius	2	4
Penstemon pahutensis	2	5
Phacelia beatleyae	2	6

(Source: U.S.DOI, BLM/USAF, 1979: Table 2-5)
(Update: Nevada Natural Heritage Program,1988)

APPENDIX H

MINERAL RESOURCES

APPENDIX H

The following are excerpts from the Final Environmental Impact Statement for the Proposed Public Land Withdrawal, Nellis Air Force Bombing Range, Nye, Clark, and Lincoln Counties, Nevada (1981), Chapter II, Description of the Environment, Mineral Resources, pp. 2–31 to 2–34:

"A Stage One Minerals Inventory has been conducted by the U. S. Geological Survey and Bureau of Mines for the Nellis AF Range and immediate area (15). The following summarizes this report.

Mining activity in the study area, Nellis AF Range and adjacent lands, began in the mid-1860's; with most of the gold-silver deposits being located during the early 1900's. Although interest in the area's mineral deposits waned shortly after their discovery, activity at some sites continued sporadically through the 1920's and 30's. Total mineral production in the area is not known, but over half of the properties listed in table 2-7 are reported to have had some output. Figure 2-9 shows the geographical location of the mining districts in the study area.

Little or no mineral exploration or related activity has occurred in the withdrawn area for nearly a half century because the Range has been withdrawn from operation of the mining laws. Nonetheless, geologic evidence and records of past mining activity support a premise that portions of the area could be a future source of selected mineral commodities to meet national requirements.

Mineral commodities found in the Nellis AF Range area are gold, silver, copper, lead, zinc, mercury, tungsten, turquoise, sand, gravel, and limestone. Some of the area within the Nellis AF Range is prospectively valuable for sodium, potassium, alunite, and potash. Approximately the eastern half of the state of Nevada is prospectively valuable for oil and gas. Much of the North Range and a small portion of the South Range falls within this zone. Gypsum and limestone are probably the most valuable commodities produced in the vicinity of, but not in, the Nellis AF Range. The average annual gypsum and limestone output for the early 1960's was estimated at 1,000,000 and 500,000 tons, respectively. Significant amounts of lead, silver, copper, and zinc have been recovered from the Groom mine about 3 miles east of the Range. (See Mining District No. 13 on figure 2-9.)

Within the study area most of the metalliferous mineral deposits consist of gold-silver minerals, occurring as fissure fillings and replacements in shear zones. Some deposits also contain lead, zinc, and copper. Several occurrences of tungsten and molybdenite have been found in one district.

Areas having the highest geologic potential for mineral resources include the north end of the North Range, east of Goldfield, which may contain significant gold-silver deposits. The Oak Spring district (No. 17 on figure 2- 9) at the north end of Yucca Flat has potential for new discoveries for tungsten- molybdenum and lead-silver deposits. Also, inasmuch as uranium mineral (sic) a few miles west of the Nellis AF Range and elsewhere in the Great Basin typically are found in Tertiary volcanic rocks and tuffaceous sedimentary rocks of silicic composition, particularly in the vicinity of volcanic centers, it appears that a fairly large area of ground having a potential for uranium resources could exist in the western part of the Range. Finally, some areas, mainly within mountainous ranges, are covered by Tertiary volcanic rocks less than 1,000 feet thick, and areas up to several miles wide, peripheral to the ranges are covered by alluvial material less than 1,000 feet thick. The bedrock beneath this relatively thin cover in places, as around the north end of Yucca Flat, may have a potential for mineral resources.

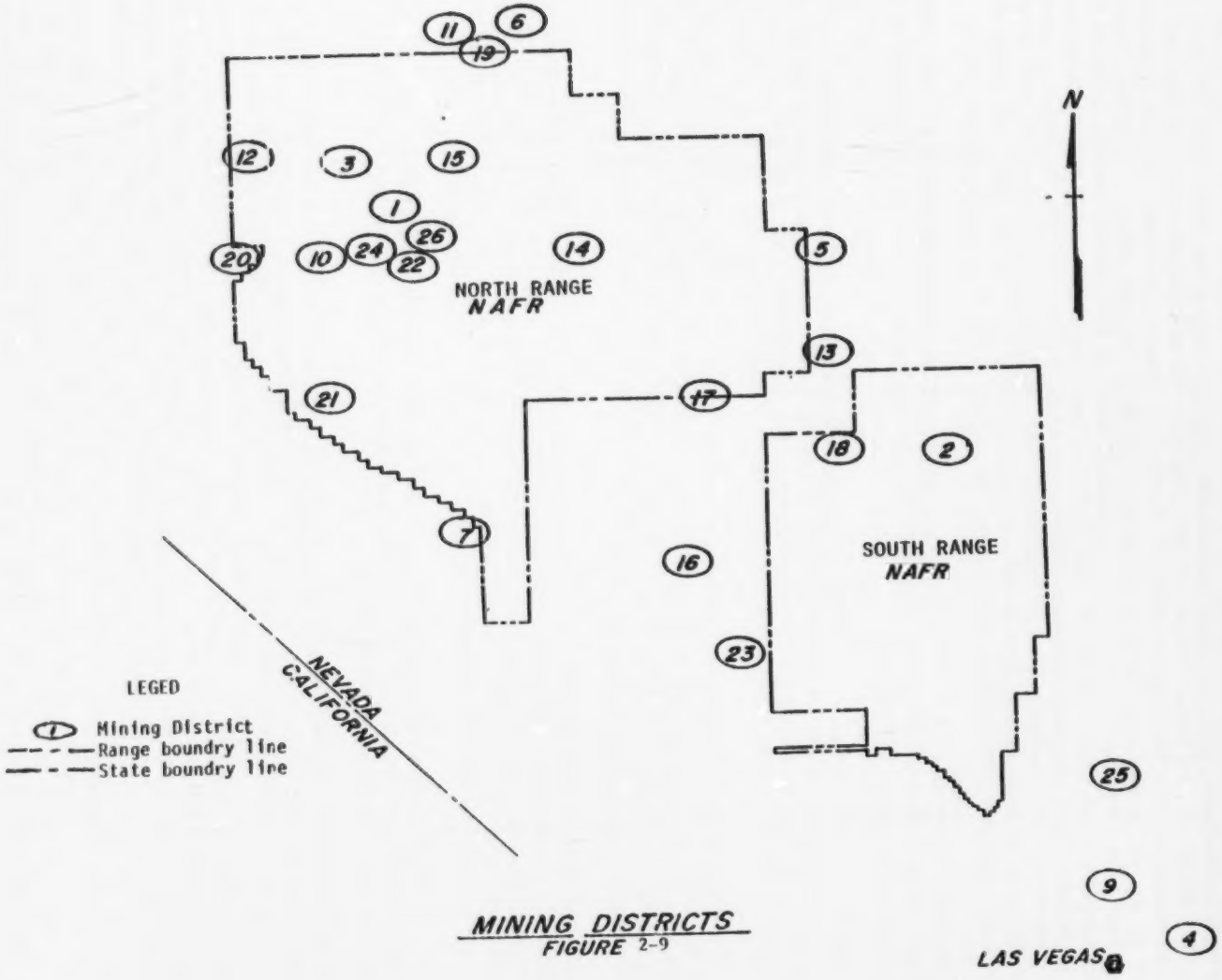
The USGS and BLM recommend that an onsite mineral resource study of the Nellis Range should be conducted to determine areas having potential for mineral resources. Further geological, geochemical, and geophysical investigations would be required to confirm the significance of these potential resource area."

TABLE 2-7

MINES ON AND ADJACENT TO NELLIS AF RANGE

MINING DISTRICT	COMMODITY	NO. OF MINES
1. Antelope Springs	Gold & Silver	3
2. Arrowhead	Copper, Lead, & Silver	1
3. Cactus Springs	Gold, Silver, Turquoise	3
4. Dike	Limestone & Lead	2
5. Dan Dale	Mercury, Lead, Silver, Copper, & Zinc	3
6. Eden	Silver, Gold	4
7. Fluorine	Fluorspar, Gold	2
8. Frenchman Mountain	Gypsum	7
9. Gass Peak	Zinc, Silver, Lead, Gold, Building Stone	3
10. Gold Crater	Lead, Gold, Silver	1
11. Golden Arrow	Silver, Gold	3
12. Goldfield	Gold	1
13. Groom	Lead, Zinc, Silver, Gold, Copper, Limestone	5
14. Kawich	Mercury, Gold, Manganese	6
15. Mellan Mountain	Gold	1
16. Mine Mountain	Lead, Mercury, Silver	1
17. Oak Springs	Tungsten, Gold, Silver, Lead, Magnesite	9
18. Papoose	Silver, Gold, Lead	1
19. Silverbow	Silver, Gold	4
20. Stonewall	Silver	1
21. Tolicha	Gold, Silver	5
22. Trappmans	Gold, Silver	1
23. Wahmonie	Gold, Silver, Copper, Travertine	4
24. Wellington	Gold, Silver, Copper	4
25. White Caps	Lead	1
26. Wilson	Silver, Gold	2

SOURCE: Reference 15.



MINING DISTRICTS
FIGURE 2-9

The following are excerpts from the Final Environmental Impact Statement for the Groom Mountain Range, Lincoln County, Nevada (1986), Chapter 3, Affected Environment, 3.8.2 Mineral Resources, pp. 3-31 to 3-35:

"The first mineral discoveries recorded in the Groom Mountain Range were made in 1864 (Paher,1970), and the Groom mining district was organized in 1869. Early accounts of the district place the mines on the western slopes of what is now known as Bald Mountain with the earliest activity having been in the northwestern portion of the range rather than at the site of the present Groom mine. An 1870 account states that silver chloride ores were being produced from mines on the west slope of Templaute Peak (Bald Mountain). The mines were worked for a 5-year period, ending in 1874, during which they yielded a small but unrecorded production. The Groom mine itself must have been discovered during this same period of time since patents were issued in 1872 on claims covering the deposit. In 1885 the Groom property was acquired by the Sheahan family, who still retain ownership. The Groom mine produced steadily from 1915 through 1918, sporadically from 1918 to 1942, and again steadily from 1942 to 1956. Total production for this time is $935,900 in lead, silver, minor copper, zinc, and gold (Tschanz and Pampeyan, 1970).

In 1919, mercury was discovered at the Andies property on the north-eastern tip of the Groom Mountain Range and a new mining district, Don Dale, was organized in this area in 1945. This district produced small amounts of lead, silver, and mercury.

Within the Groom Mountain Range Withdrawal area, which includes all of the Groom district and a part of the Don Dale district, mining and prospecting activity has been concentrated at four general locations along the west flank of the range and at one location on the northeastern edge of the area. Mining claims associated with this activity are shown in Figure 3.7 and are listed in Table 3.10.

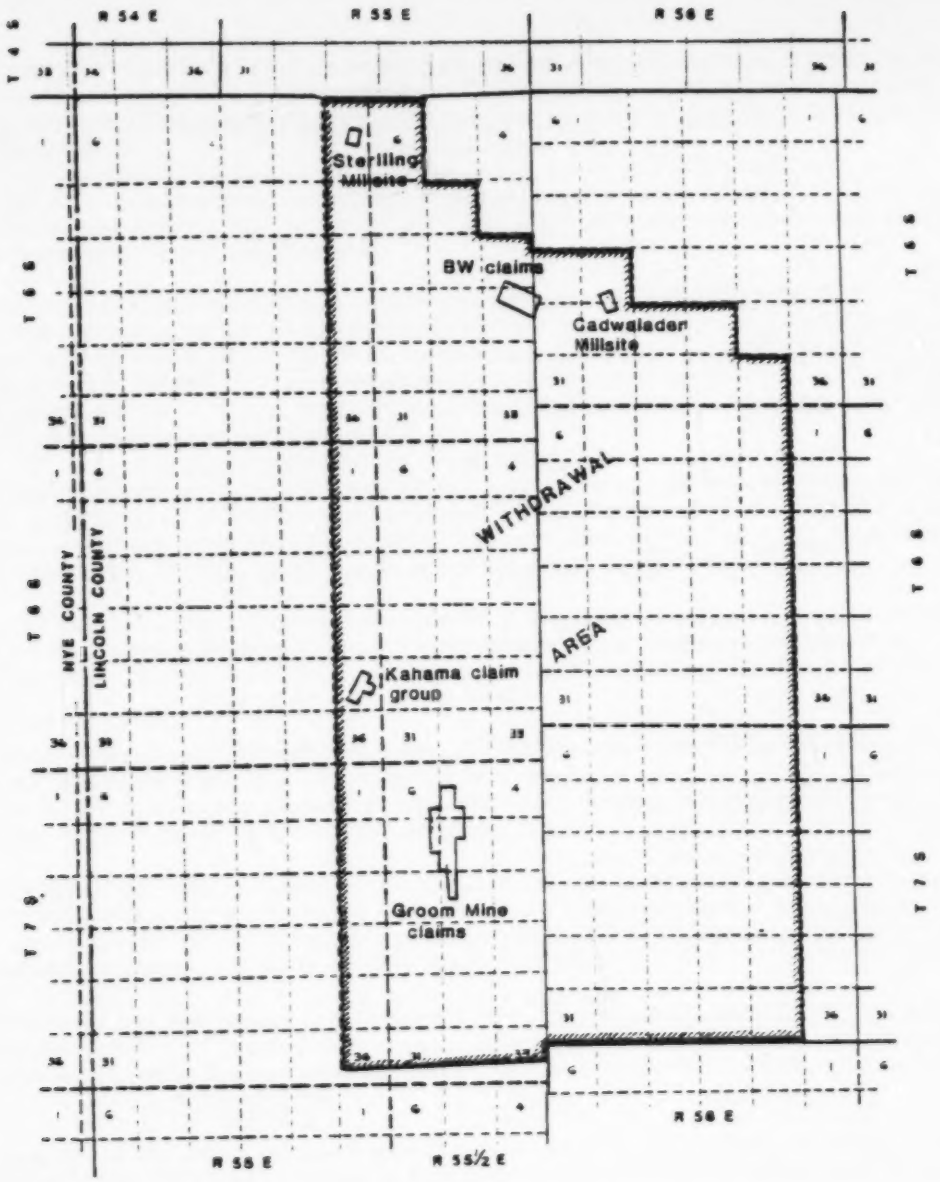
The largest and most productive properties in the Groom district are associated with the Groom Mine and the adjacent Black Metal Mine. Mineralization can be traced by mine workings and outcrops on the surface for several miles along the eastern margin of the graben. Areas of quartz veining and brecciation crop-out through a cover of alluvium north of the main Groom mine. These veins have been prospected by minor workings, apparently without success.

Most of the mine workings at the Groom Mine were sunk on visible mineralization in outcrop along the east side of the north-south structures associated with the graben. Very little drifting or drilling has been done to develop new ore according to the owner (per. comm. Sheahan, 1985). An adit is currently being driven to an ore body beneath the open-pit adjacent to the main Groom Mine. In addition, maintenance work is continuing on the main adit to the Groom Mine to limit flooding and caving.

The Boondock Lode claim is located immediately to the west of the Groom properties. The worked vein is in a prominent quartzite outcrop that occupies the bottom of the major canyon, and is several feet south of the discovery monument on the Boondock Lode Claim.

A little more than three miles northwest of the Groom Mine is the location of the Hanus prospect or Kahama Claim Group. This property has a history of minor gold production in the 1920's and 1930's but no supporting records of this production have been found. The present Kahama Claim Group covers the two inclines, prospects, and open trenches in the southern drainage. The southern incline was reported to be 60 feet deep (Humphrey,1945). Humphrey also reported a gold assay of 1.08 oz/ton from a small ore dump. Three adits and prospects in the drainage to the north appear along a parallel vein system that is several hundred feet to the west of the main Kahama vein. The gold content of the vein is similar to that of the main Kahama vein but the base metal content is much higher, the vein is thicker and is more brecciated.

A third area of mineralization located in a the quartzite outcrop along the west side of the range is centered along a NE trending ridge with parallel quartz veins about one mile southwest of Cattle Spring. It is possible that this mineralization is a northern extension of the Kahama vein system. About 200 feet below and east of the ridge is an incline that is flooded to within 25 feet of the surface. The size of the dump



Patented and Unpatented
Figure 3.7 Mining Claims Location Map
GROOM MOUNTAIN RANGE WITHDRAWAL AREA

0 1 2 3
SCALE - MILES

TABLE 3.10 MINING CLAIMS, GROOM MOUNTAIN RANGE WITHDRAWAL AREA

Groom Mining District

T6S, R55E:

Unpatented Claims
Kahama Gold
New Kahama
New Kahama Extra

T7S, R551/2E:

Patented Claims	Patent No.	Minerals Survey No.
White Lake and Conception Lode	1660	M.S. 37
White Lake No. 2 and Conception No. 2 Lode	1661	M.S. 38
South End and South End Fraction	1034979	M.S. 4658
Bride Lode	1034979	M.S. 4658
Southern Groom Lode	1055957	M.S. 4659

Unpatented Claims
Boondock Lode Claim

Unpatented Claims
Groom Mine Lode Group: (Maria, Willow, East No. 1, East Side No. 2, June, Junior, Senior, Ford, Martha, July, Cliff, Mill, Pond, Mary, Avis)

Don Dale Mining District

T5S, R55E:

Patented Claims	Patent No.	Mineral Survey No.
Sterlling Millsite	9368	M.S. 57B

T5S, R551/2E:

Unpatented Claims
B.W. Claims

T5S, R56E:

Patented Claims	Patent No.	Mineral Survey No.
Cadwalader Millsite	3379	M.S. 41B

suggests a possible 200-300 feet of underground workings. Five prospects and a shallow adit expose quartz veins with visible silver mineralization along the crest of the northeast ridge and into the canyon to the southwest.

Stream drainages in the vicinity of the Hanus property and the main drainage west of Cattle Spring, as well as the major stream courses west of Naquinta (or La Quinta) Spring were all worked for gold using dry washers. The best areas were apparently the narrow passages within the quartzite. No record of the production was found.

The Gold Butte claims (abandoned) staked in 1933 cover a fourth area of mineralization located about 1 1/2 miles west of Cattle Spring. These workings, which do not appear on existing maps, consist of several prospects on quartz veins up to several feet thick.

The site of the old Jumbo quartz Placer claims (abandoned) staked in 1933 is about 1 1/2 miles northwest of Cattle Spring and about 1/2 mile west of Black Butte (the basalt plug west of the road by Cattle Spring). These workings consist of a 40-50 foot deep shaft sunk near a shale quartzite contact on the west side of the highest ridge. There is no road to the prospect nor are the workings on any map. The workings are still open, having been sunk, in part, on a very hard, brecciated quartz vein. The matrix of the breccia is sulfide rich and contains minor gold-silver values.

Along the northwest margin of the withdrawal area, but still in the outcrop area of Prospect Mountain Quartzite, are a scattering of unidentified and unmapped shafts, adits and prospects that are probably related to the mineralization in the Don Dale district to the north. Most of these workings are old and are without accessible roads. They are not shown on any of the existing maps of the area.

As part of the mineral investigation of the Groom Mountain Range withdrawal area, geochemical surveys were conducted of both stream sediments collected from active drainage systems originating within the area and of rock samples collected from mines and prospects within and along the margins of the land withdrawn.

The sampling detected very high levels of mercury throughout the Groom Mountain Range in both panned concentrate and rock samples. Mercury has been produced from one cinnabar occurrence in volcanic rocks on the northeast side of the Groom Mountain Range (Andies mine, outside of the withdrawal) but has not been reported present within the Groom Mining District.

In addition to mercury, barium was also found to be present in anomalous amounts in panned concentrate samples collected from drainages along the southwest, northwest, northeast, and east sides of the area. Distribution of high barium values in general follows that of mercury and the two elements may be associated with the volcanic activity of the Bald Mountain caldera.

High concentrations of lead, copper, barium, and mercury along with lessor amounts of zinc, silver, and antimony were detected in panned concentrate samples collected from drainages south of the Groom mine workings. This area is along the southern extension of the graben structures mineralized at the Groom mine.

On the east side of the district, sediment sampling detected anomalous metal concentrations in the drainage of Rock Spring. No mines or prospects exist in this area and the source of the metal anomaly is not known."

The following are excerpts from the Final Environmental Impact Statement for the Proposed Public Land Withdrawal, Nellis Air Force Bombing Range, Nye, Clark, and Lincoln Counties, Nevada (1981), Chapter III, Environmental Impacts of the Proposed Action, Mineral Resources, pp.3-12 to 3-13:

"An extensive literature search and a review of core drilling data provided by the DOE has been conducted by BM and U.S.G.S. to evaluate the mineral potential on the Nellis AF Range.

Little or no mineral exploration, or related activity, has occurred in the withdrawn area for nearly half a century; however, Cornwall and Norberg (15) indicates geologic evidence and records of past mining activity support a premise that portions of the area could be a future source of selected mineral commodities to meet national requirements.

Cornwall and Norberg (15) suggests that mineral resources may be in the north end of the North Range, east of Goldfield around the Cactus and Kawich Ranges, and in the Oak Springs district (No. 17 on figure 2-9) at the north-east end of the NTS. Further geological, geochemical, and geophysical investigations would be required to more accurately delineate the nature and extent of significant mineral resource occurrences.

The DOI and DOD are currently negotiating an interagency agreement on mineral survey requirements for military withdrawn lands. As soon as the survey policy is completed, the Nellis AF Range will be available for BLM to conduct more extensive investigations to document the mineral base on the Range. If these surveys show the Range contains a commodity vital to the national needs, the Range withdrawal may have to be modified and a mineral management plan developed among all interested parties."

The following are excerpts from the Final Environmental Impact Statement for the Groom Mountain Range, Lincoln County, Nevada (1986), Chapter 4, Environmental Consequences, 4.2.8 Land Use, Mining—pp. 4–5to 4–6;4.2.10 Economics, Mining––,p. 4–10;4.3 Potential Mitigation Measures, 4.3.2 Mining and Minerals, pp.4–12 to 4–13;and 4.4 Unavoidable Adverse Impacts, 4.4.2 Local Short–Term Verses Long–Term Productivity, p. 4–20:

"4.2.8 Land Use, Mining

Renewed withdrawal would prevent new mineral exploration and eliminate the opportunity to expand property holdings to: 1) gain mill sites; 2) gain tailings disposal room; or 3) develop water sources. This set of conditions would, in effect, eliminate the possibility of any large-scale mining

operations on the three smallest claim holdings within the Groom Mountain Range (BW claims, Kahama claims, Boondock claim). None of these claim blocks cover large enough area to support the surface plant that would be needed for anything but the smallest of underground mining operation. The BW claims, located on the east side of the range, could feed ore and/or tailings to sites in Tikaboo Valley outside of the withdrawal area. The other two small properties, located on the west side of the range, have no such opportunity unless ores were hauled long distances to sites beyond the limits of the restricted area.

The Groom mine claim block covers sufficient surface area to contain both mine surface plant and mill, but the Groom property owners could face restrictions on tailings disposal and water supply. The described ore zones at the Groom mine lie well within the existing claim block but potential new reserves which may be necessary to support future operations, could be found anywhere on the claims, near boundaries or extending beyond onto withdrawn lands.

None of the mineral properties within the withdrawal area can be considered to be thoroughly or even adequately explored. The properties are owned by families or individuals who may not have the financial reserves required to explore for minerals and develop mines. Future mineral activity in the Groom district is, therefore, dependent on the lease or sale of properties to major mining companies that have capital and technical resources needed for mineral exploration and development. It is highly unlikely that a major mining company would consider acquiring any of the properties within the Groom Mountain Range in view of renewed land withdrawal.

The potential effect on mining operations in the area can be considered as two separate effects: loss of income and loss of access to mineral reserves. The Air Force has proposed to : a) allow holders of valid claims controlled access to work their claims at approximately the existing level of activity; or b) subordinate valid claims; or c) outright purchase of valid claims. If existing levels of activity are continued with controlled access, there will be a potential loss of income through inability to expand or further develop the claims. If the claims are subordinated by the Air Force, the owners would continue to own the claims and receive

monetary payment in exchange for the legal right to defer extraction of the minerals. Outright purchase would terminate ownership of the claims. If purchased at fair market value there would be no economic loss to the owners. Owners of claims that have not been recently active have had no income from their claims and therefore, there is no loss in present value although there is a complete loss in the speculative value of these claims. Just compensation would depend on an evaluation of the existing and potential reserves of each property. At the present time, there are insufficient data available to do more than estimate the potential of any of the properties in the Groom Mountain Range.

Economic Use-Mining--

The total value to the economy of the loss of access to mineral reserves depends upon the price for raw materials and the discount rate applied to delaying consumption of those materials. The withdrawal does not result in a consumptive use of the reserves, therefore, they can be used at some future date when the social benefit may be very different.

The actual total value to the economy of the loss of access to mineral reserves depends upon the price for raw materials, production inputs, and the interest rate.

4.3.2 Mining and Minerals

Potential Mitigation No. 2: Open Other Military Withdrawals to Minerals Exploration and Development--

The possibility of making other lands in Nevada, which have been withdrawn for military purposes, available for mineral exploration in lieu of the lands lost to exploration in the Groom Mountain Range has been investigated. This land trade could not be done on a value-for-value basis since exploration potential is speculative in any area. An area of equal size carved from one or more other DOD holdings within the state would be traded for the lands within the Groom Mountain Range. If done, this could mitigate general losses to the mining industry at large but would not provide compensation to the current property owners within the area. Other DOD lands within Nevada include Nellis AFB, Nellis AF Range, U.S. Army Ammunition Depot at Hawthorne, U.S. Navy Bombing Target Areas in Churchill County, and portions of the Wendover AFB, and all but one of the Navy Bombing Target Areas, each of the listed DOD properties has a history of mineral exploration or production. Some of these areas, such as portions of the northern Nellis AF Range just east of the Goldfield district, the Tolicha Peak area, Stonewall Mountain area, and parts of the Cactus and Kawich ranges have high exploration potential and many mining groups would like to see these areas open for exploration. There are gold prospects in several areas along the margins of the Army Ammunition Depot in Mineral County and the Navy controls part of the Fairview silver districts as part of one of its bombing areas east of Fallon. The southern portion of the Nellis AF Range, the part that is occupied jointly by the Air Force and the Desert Game Range, may not fall into the category of DOD lands since the Department of Interior actually manages the land with joint usage by the Air Force. Within this area, however, there are rock types and structures which suggest that disseminated gold deposits similar to the Carlin Mine in Eureka County could occur.

In summary, there are many areas within existing DOD withdrawal in Nevada that could provide sufficient mineral exploration opportunities to compensate the general mining public for loss of Groom Mountain Range mineral potential. In reality, however, few, if any, of these areas could be considered for a potential trade. Many areas within the Nellis AF Range could not be considered due to security considerations. Other areas are active bombing ranges and public safety could not be assured and still maintain the military usage. Analysis of the locations of areas potentially attractive for minerals exploration and development, together with locations of on-going military training and testing programs, indicates that it would not be possible to open any portion of Nellis AF Range without seriously compromising national defense programs, therefore this mitigation is not recommended.

Potential Mitigation No. 3: Compensate Owners of Valid Patented and Unpatented Mining Claim--

The Air Force will, at its option, either subordinate valid existing mineral claims or allow holders of valid claims controlled access to work claims at approximately the existing levels of activity. Subordination is a monetary payment to the claim holder in exchange for the legal right to defer extraction of the minerals. The amount of the payment would be based on the fair market value of the claim. At the present time, there are insufficient data available to do more than estimate the potential of any of the properties in the Groom Mountain Range. No mineral rights would be lost, since controlled access sufficient to preserve them will be provided. However, the combined effect of the two options will be to defer for the term of the withdrawal significant development of the claims or large scale mineral extraction. Compensation, as required, would be in the form of a subordination agreement, as described above, or outright purchase of the claims."

4.4 UNAVOIDABLE ADVERSE IMPACTS

4.4.1 Impacts Which Cannot Be Mitigated

Based on analysis of the proposal for renewed withdrawal, the land involved and the likely consequences, the only impact which cannot be mitigated is the loss of 89,600 acres of public land available for broadscale multiple use by the public. Groom Mountain Range has characteristics and attributes that are specific to that area, and thus the loss cannot be fully mitigated even by opening other areas, improving recreational opportunities elsewhere or providing economic compensation. To the extent that private rights within the withdrawal area can be compensated for financially, loss of full exercise of those rights could be mitigated. However, heritage and tradition are generally not financially compensable.

4.4.2 Local Short-Term Versus Long-Term Productivity

Mineral productivity of the area could be totally lost in the near-term and possibly in the long-term. However, there are no known economic deposits of strategic materials in the area and thus nationally this lack of productivity is not a serious matter. In either case renewed withdrawal would not consumptively use the area's mineral resources, and they would, therefore, remain unavailable for production at some future time."

The following are excerpts from the Final Environmental Impact Statement for the Proposed Public Land Withdrawal, Nellis Air Force Bombing Range, Nye, Clark, and Lincoln Counties, Nevada (1981), Chapter V, Adverse Impacts that cannot be Avoided should the Proposal be Implemented, Mineral Resources, p. 5-4:

"There may be some potential for mining several minerals on the Nellis AF Range. As the national mineral resource reserves are depleted, areas that may have some potential will become more important. Continued withdrawal of the Nellis AF Range precludes mining activity but does not prevent more intensive mineral surveys. If studies determine the withdrawn land contains minerals of vital importance to the economic stability of the Nation, the withdrawal may have to be modified."

GLOSSARY

GLOSSARY

ACRE-FOOT. The amount of water that will cover one acre of land to a depth of one foot (323,851 gallons or 43,560 cubic feet).

ACTIVITY PLAN. Site-specific plan which precedes actual development. The most detailed level of BLM planning.

ALLUVIAL FAN. A fan-shaped accumulation of disintegrated soil material; water deposited and located in a position where the water departs from a steep course to enter upon a flat plain or open valley bottom.

ALLOTMENT. An area allocated for the use of the livestock or one or more qualified grazing permittees or lessees which includes prescribed numbers and kinds of livestock under one plan of management.

ALLOTMENT MANAGEMENT PLAN. A documented program which applies to livestock operations on the public lands, which is prepared in consultation with the permittee (s) or lessees involved, and which : 1) prescribes the manner in which livestock operations will be conducted in order to meet the multiple-use, sustained yield, economic, and other needs and objectives as determined for the public lands through land use planning.

ALLUVIUM. Material, including clay, silt, sand, gravel, or similar unconsolidated sediments, deposited by a stream bed or other body of running water.

ANIMAL UNIT (AU). Considered to be one mature cow (1,000 pounds) or its equivalent based upon average daily forage consumption of 26 pounds of dry matter per day.

ANIMAL UNIT MONTH (AUM). The amount of food or forage required by an animal unit for one month.

ANNUAL PLANT SPECIES . A plant that completes its life cycle and dies in 1 year or less.

APPARENT TREND. An interpretation of the direction of change in vegetation and soil protection over time, based on a single observation. Apparent trend is described in the same terms as measured trend except that when no trend is apparent, it shall be described as none.

AQUIFER. A water-bearing unit of permeable rock or sediment which is capable of yielding water to wells.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC). Areas within the public land where special management attention is needed to protect and prevent irreparable damage to important historical, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards.

ASPECT SPECIES. A vegetation species that appears to be dominant in the landscape, although it may be only a small percent of the total vegetation composition.

BIOMASS . The total quantity of living organisms of one or more species per unit of space (called species biomass) or of all the species in a community (called community biomass).

BROWSE(noun) That part of leaf and twig growth of shrubs. woody vines, and trees available for animal consumption. (verb) To consume browse.

BROWSERS. Animals which feed primarily on browse.

CALCAREOUS SOIL. Soil containing sufficient free calcium carbonate or calcium magnesium carbonate to bubble visibly when treated with cold 0.1N hydrochloric acid.

CALCIC HORIZON. A layer of secondary accumulation of carbonates, usually with calcium or magnesium in excess of 15 percent calcium carbonate equivalent and containing at least 5 percent more carbonate than an underlying layer.

CALICHE. A layer in the soil more or less cemented by calcium carbonates (CaCo3), commonly found in arid and semiarid regions.

CAMPSITE. A cultural site type representative of all periods consisting of temporary habitation areas

which usually contain a lithic scatter, evidence of fire use, ground stone, and pottery scatter.

CANDIDATE SPECIES. Any species of plant or animal listed in the Federal Register for consideration to be listed as threatened or endangered by U.S. Fish and Wildlife Services (USFWS) under the Endangered Species Act. Definitions for Categories 1 and 2 candidate species, excerpted from the Federal Register, are as follows:

Category 1: Taxa for which the USFWS currently has on file substantial information on biological vulnerability and threat(s) to support the appropriateness of proposing to list them as endangered or threatened species. Presently, data are being gathered concerning precise habitat needs, and for some of the taxa, concerning the precise boundaries for critical habitat designations. Development and publication of proposed rules on these taxa are anticipated, but, because of the large number of such taxa, could take some years. Also included in category 1 are taxa whose status in the recent past is known, but that may already have become extinct.

Category 2: Taxa for which information now in possession of the USFWS indicates that proposing to list them as endangered or threatened species is possibly appropriate, but for which substantial data on biological vulnerability and threat(s) are not currently known or on file to support the immediate preparation of rules. Further biological research and field study usually will be necessary to ascertain the status of the taxa in Category 2, and some of the taxa are of uncertain taxonomic validity. It is likely that some of the taxa will not warrant listing, while others will be found to be in greater danger of extinction than some taxa in category 1.

CARRYING CAPACITY. Maximum stocking rate possible without inducing damage to vegetation or related resources. It may vary form year-to-year on the same area due to fluctuating weather conditions and forage production. (See Grazing capacity.)

CLAY. A mineral soil separate consisting of particles less than 0.002 millimeters in equivalent diameter.

CLIMAX VEGETATION COMMUNITY. The final or stable community in a series of successive vegetation states which is self-perpetuating and in dynamic balance with the physical and biotic environment.

COVER. Small rocks, litter, basal areas of grass and forbs, and aerial coverage of shrubs that provide protection to the soil surface (i.e. in contrast to bare ground.)

CRITICAL HABITAT. Any of all habitat element(s), the loss of which would appreciably decrease the likelihood of the survival and recovery of an officially listed species. It may represent any portion of the present habitat of any officially listed species and may include additional areas for population expansion.

CRUCIAL HABITAT. Habitat on which a species depends for survival; there are no alternative ranges or habitats available.

CULTURAL RESOURCE INVENTORY CLASSES.

Class I— Existing Date Inventory: an inventory study of a defined area designed to provide a narrative overview (cultural resource overview) derived from existing cultural resource information and to provide a compilation of existing cultural resource site record data on which to base the development of BLM's site record system.

Class II— Sampling Field Inventory: a sample-oriented field inventory designed to locate and record, from surface and exposed profile indications, all cultural resource sites within a portion of a defined area in a manner which will allow an objective estimate of the nature and distribution of cultural resources in the entire defined area. The Class II inventory is a tool utilized in management and planning activities as an accurate predictor of cultural resources in the area of consideration. The primary area of consideration for the implementation of a Class II inventory is a planning unit. The secondary area is a specific project in which an intensive field inventory (Class III) is not practical or necessary.

Class III— Intensive Field Inventory: an intensive field inventory designed to locate and record, from surface and exposed profile indications, all cultural resource sites within a specified area. Normally, upon completion of such inventories in an area, no further cultural resource inventory work is needed. A Class III inventory is appropriate on small project areas, all areas to be disturbed, and primary cultural resource areas.

DECREASER. The most desirable forage plants. The first plants to decrease in composition in the plant community when overgrazing occurs.

DIVERSITY. An attribute of an area which is an expression of both the total number and relative abundance of species, communities, or habitats. Relative abundance can be measured by numbers of individuals, cover, or various other characteristics.

EARLY SERAL. A plant community with a species composition which is 0-25% of the potential natural community one would expect to find on that ecological site.

ECOLOGICAL SITE. A kind of land with a specific potential natural community and physical site characteristics differing from other kinds of land in its ability to produce vegetation and to respond to management.

ECOLOGICAL STATUS. The present state of vegetation and soil protection of an ecological site in relation to the potential natural community for the site. Vegetation status is the expression of the relative degree to which the kinds, proportions, and amounts of plants in a community resemble that of the potential natural community. If classes are used, they should be described in ecological rather than utilitarian terms. Soil status is a measure of present vegetation and litter cover relative to the amount of cover needed on the site to prevent accelerated erosion.

ENDANGERED SPECIES. An animal or plant whose prospects for survival and reproduction are in immediate jeopardy, and as further defined by the Endangered Species Act of 1973.

ENVIRONMENTAL ASSESSMENT (EA). A concise public document for which a Federal agency is responsible that serves to: (a) briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact; (b) aid an agency's compliance with the National Environmental Policy Act (NEPA) when no environmental impact statement is necessary; (c) facilitate preparation of a statement when one is necessary. An EA includes brief discussions of the need for the proposal, of alternatives as required by SEc. 102 (2) of NEPA, of the environmental impacts of the proposed action and other alternatives, and a listing of agencies and persons consulted.

EROSION. The wearing away of land surface by wind, running water, and other geological agents.

EXOTIC SPECIES. A species which is not native to the United States.

FLPMA. Federal Land Policy and Management Act of 1976, which mandated the BLM Wilderness Review. Often referred to and pronounced "FLIPMA".

FORAGE. All browse and herbaceous foods available to grazing animals.

FORAGE RESERVATION. The amount of or percentage of the total forage produced which is designated for a particular use such as livestock grazing, wildlife, or watershed protection.

FORAGE UTILIZATION. An index of the extent to which forage is used. Utilization classes range from slight (less than 20 percent) to severe (more than 80 percent).

FORB. Any herbaceous nonwoody plant that is not grass or grass-like.

GRASS. Any of a family of plants with narrow leaves, jointed stems, and seed- like fruit.

GRAZING CAPACITY. The maximum livestock stocking rate possible without inducing damage to vegetation or related resources such as watershed. This incorporates factors such as suitability of the rangeland for grazing as well as the proper use which can be made on all of the plants within the area. Normally expressed in terms of acres per animal unity month (Ac/AUM) or sometimes referred to as the total AUMs that are available in any given area, such as an allotment. Areas that are unsuitable for livestock use are not computed in the grazing capacity. Grazing capacity may or may not be the same as the stocking rate.

GULLY EROSION. Removal of soil leading to formation of relatively large channels or gullies cut into the soil by concentrations of runoff.

HABITAT. An area where a plant or animal lives. Sum total of environment conditions in the area.

HABITAT MANAGEMENT PLAN (HMP). A written and officially approved plan for a specific geographical area of public land which identifies wildlife habitat and related objectives, establishes the sequence of actions for achieving objectives, and outlines procedures for evaluating accomplishments.

HEAVY USE. Indicates that 60-80 percent of current year's forage production has been eaten or destroyed by grazing animals.

HERD MANAGEMENT AREA PLAN. A written and officially approved plan for a specific geographical area of public land which identifies wild horse (or burro) herd use areas and habitat, identifies population and habitat objectives, establishes the sequence of actions for achieving objectives, and outlines procedures for evaluating accomplishments.

HISTORICAL CULTURAL RESOURCES. Historical cultural resources include all mines, ranches, towns, resorts, railroads, trails, and other evidence of human use from the entrance of the Spanish to 1938.

KEY FORAGE SPECIES. Forage species whose use serves an indicator of the degree of use of associated species.

LATE SERAL. A plant community with a species composition which is 51-75% of the potential natural community one would expect to find on that ecological site.

LESSEE. The recipient of a grazing lease.

LIGHT USE. Indicates that 20-40 percent of current year's forage production has been eaten or destroyed by grazing animals.

LIMESTONE. A sedimentary rock consisting chiefly (more than 50 percent) of calcium carbonate, primarily in the form of calcite.

LITHIC. A stone or rock exhibiting modification by humans. It generally applies to projectile points, scrapers and chips, rather than ground stone.

LITHIC SCATTER. A prehistoric cultural site type where flakes, cores, and stone tools are located as a result of the manufacture or use of the tools.

LOAM. Soil material that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand.

LOCATABLE MINERAL. A mineral subject to location under the 1872 mining laws. Examples of such minerals would be gold, silver, copper, and lead as compared to oil and natural gas, which are leasable minerals.

LONG-TERM IMPACT. Twenty years and beyond; approximately the year 2009.

MANAGEMENT FRAMEWORK PLAN (MFP). A planning decision document that establishes for a given planning area land use allocations, coordination guidelines for multiple use, and management objectives to be achieved for each class of land use or protection. An MFP is prepared in three steps: (1) resource recommendations, (2) impact analysis and alternative development, and (3) decision making.

MID SERAL. A plant community with a species composition which is 26-50% of the potential natural community one would expect to find on that ecological site.

MODERATE USE. Indicates that 40-60 percent of current year's forage production has been eaten or destroyed by grazing animals.

OVERGRAZING. Consumption of vegetation by herbivores beyond the endurance of a plant to survive.

PERENNIAL PLANT SPECIES. A plant that has a life cycle of 3 years or more.

PERENNIAL STREAM. A stream of portion of stream which flows continuously.

PERMITTEE. One who holds a permit to graze livestock on public land.

PETROGLYPH. A form of rock art manufactured by incising, scratching or pecking designs into rock surfaces.

PICTOGRAPH. A form of rock art created by applying mineral based or organic paints to rock surfaces.

PLANT COMMUNITY. One of more plant species growing in association on a given location or area.

PLAYA. The usually dry and nearly level lake plain that occupies the lowest part of a closed depression.

PREDATOR. An animal that preys on one or more other animals.

PROPOSED SPECIES. Any species of plant or animal formally proposed by the U.S. Fish and Wildlife Service (USFWS) to be listed as threatened or endangered under the Endangered Species Act.

PUBLIC LAND. Any land and interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, except:

— lands located on the Outer Continental Shelf;

— lands held for the benefit of Indians, Aleuts, and Eskimos;

— lands in which the United States retains the minerals, but surface is private.

RANGE IMPROVEMENT. A structure, development or treatment used to rehabilitate, protect or improve the public lands to advance range betterment.

RANGE SITE. Rangeland that differs in its ability to produce a characteristic natural plant community. A range site is the product of all the environmental factors responsible for its development. It is capable of supporting a native plant community typified by an association of species that differ from other range sites in the kind or proportion of species or in total production.

RANGE TREND. The direction of change in range condition; it indicates whether range condition is improving, declining or remaining stable.

RANGELAND CONDITION (ECOLOGICAL). The present state of the vegetation on a range site in relation to the climax (natural potential) plant community for that site. It is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the climax plant community for the site. Rangeland condition is basically an ecological rating of the plant community.

Four classes are used to express the degree to which the composition of the present plant community reflects that of the climax.

Ecological Condition Class	Percentage of Present Plant Community that is Climax for the Range Site
Excellent	76-100
Good	51-75
Fair	26-50
Poor	0-25

RANGELAND CONDITION TREND. The direction of change in rangeland condition.

RAPTOR. Any predatory bird (such as a falcon, hawk, eagle or owl) that has feet with sharp talons or claws adapted for seizing prey and a hooked beak for shearing flesh.

RIGHT-OF-WAY (ROW) An easement or permit which authorizes public land to be used for a specified purpose that generally requires a long narrow strip of land. Examples are roads, powerlines, pipelines, etc.

RIPARIAN ZONE. The banks and adjacent areas of water bodies, water courses, seeps, springs, and meadows, whose waters provide soil moisture sufficiently in excess of that otherwise available locally so as to provide a more moist habitat than that of contiguous plains and uplands.

ROCK ART (PETROGLYPH OR PICTOGRAPH). An Archaic to Modern cultural site type consisting of incised or painted figures such as people, animals, plants or abstracts on a rock surface.

ROCK SHELTER. A cultural site type representative of all periods consisting of an area protected by an overhanging cliff. Often associated with the same materials as a campsite or rock art.

RUNOFF. A general term used to describe the portion of precipitation on the land that ultimately reaches streams; may include channel and non-channel flow.

SAND. Individual rock or mineral fragments in a soil that range in diameter from 0.05 to 2.0 millimeters. Most sand grains consist of quartz, but they may be of any mineral composition. The textural class name of any soil that contains 85 percent or more sand and less that 10 percent clay.

SECTION. One square mile or 640 acres.

SEDIMENT. Solid, clastic material, both mineral and organic, that is in suspension, is being transported or has been moved from its site of origin by water, wind, or ice and has come to rest on the earth's surface.

SEVERE (OR SACRIFICE) USE. Utilization in excess of 80 percent.

SHORT-TERM IMPACT. Ten years or less; approximately the year 1999.

SILT. Sedimentary material consisting primarily of mineral particles intermediate in size between sand and clay/

SLIGHT USE. Indicates that 0 to 20 percent of current year's forage production has been eaten or destroyed by grazing animals.

SOIL. (a) The unconsolidated mineral material on the immediate surface of the earth that serves as a natural medium for the growth of land plants. (b) The unconsolidated mineral matter of the surface of the earth that has been influenced by genetic and environmental factors including parent material, climate, topography, all acting over a period of time and producing soil that differs from the parent material in physical, chemical, biological, and morphological properties and characteristics.

SOIL ASSOCIATIONS. (a) A group of defined and named taxonomic soil units occurring together in an individual and characteristic pattern over a geographic region, comparable to plant associations in many ways. (b) A soil mapping unit in which two or more defined taxonomic units occurring together in a characteristic pattern are combined because of map scale or intermixing of taxonomic units.

SOIL COMPACTION. A decrease in the volume of a soil as a result of compressive stress from livestock trampling as an example.

SOIL DEPTH.

	Lower boundary in inches.
Very shallow	12
Shallow	12—20
Moderately deep	20—36
Deep	36—40
Very deep	40

SOIL PROFILES. A succession of soil zones or horizons beginning at the surface that have been altered by normal soil-forming processes.

SOIL SERIES. A group of soils having genetic horizons (layers) that, except for texture of the surface layer, have similar characteristics and arrangement in the profile.

SUCCESSION. An orderly process of community development that involves changes in species structure and community processes with time; it is reasonably directional and, therefore, predictable.

SUSTAINED YIELD. The achievement and maintenance in perpetuity of a high level of annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.

THREATENED SPECIES. Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, and as further defined by the Endangered Species Act of 1973.

UTILIZATION. The portion of the current year's forage production that is consumed or destroyed by grazing animals.

VEGETATION STATUS. The expression of the relative degree to which the kinds, proportions, and amounts of plants in a community resemble that of the potential plant community (see early seral, mid seral, late seral and potential natural community).

VISUAL RESOURCE MANAGEMENT (VRM). The planning, design, and implementation of management objectives to provide acceptable levels of visual impacts for all BLM resource management activities.

VISUAL RESOURCES. Visible features of the landscape including land, water, vegetation, and animals.

WILDERNESS CHARACTERISTICS. Identified by Congress in the 1964 Wilderness Act; namely size, naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation, and supplemental values such as geological, archeological, historical, ecological, scenic, or other features. It is required that the area possess at least 5,000 acres or more of contiguous public land or be of a size to make practical its preservation and use in an unimpaired condition; be substantially natural or generally appear to have been primarily by the forces of nature, with the imprint of man being substantially unnoticeable; and have either outstanding opportunities for solitude or a primitive and unconfined type of recreation.

WILDERNESS STUDY AREA (WSA). A roadless area which has been found to have wilderness characteristics.

WILDERNESS STUDY CRITERIA. The criteria and quality standards developed in the Wilderness Study Policy to guide planning efforts in the wilderness EISs.

WILD HORSE HERD AREA. An area of the public lands which provides habitat for one or more wild horse herds.

WILD HORSE. All unbranded and unclaimed horses and their progeny that have used public lands on or after December 15, 1971, or that do use these lands as all or part of their habitat.

ABBREVIATIONS AND ACRONYMS

ACEC	Area of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
ADC	Animal Damage Control
AML	Appropriate Management Levels
AMP	Allotment Management Plan
AQCR	Air Quality Control Regions
AUM	Animal Unit Month
BLM	Bureau of Land Management
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CRA	Caliente Resource Area
CRMP	Coordinated Resource Management and Planning
DEIS	Draft Environmental Impact Statement
DOE	Department of Energy
DRP	Draft Resource Plan
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act
HMAP	Herd Management Area Plan
HMP	Habitat Management Plan
LVDO	Las Vegas District Office
MFP	Management Framework Plan
MOU	Memorandum of Understanding
MSA	Management Situation Analysis
NAFB	Nellis Air Force Base
NEPA	National Environmental Policy Act of 1969
NDOW	Nevada Department of Wildlife
NHA	Natural Hazard Areas
NHPA	National Historic Preservation Act of 1966
NSO	Nevada State Office
NWHR	Nevada Wild Horse Range
ONA	Outstanding Natural Areas
PRP	Proposed Resource Plan
PL	Public Law
RMP	Resource Management Plan
RNA	Resource Natural Area
RPS	Rangeland Program Summary
ROD	Record of Decision
ROW	Right-of-way
SCS	Soils Conservation Service
SHPO	State Historic Preservation Office
USAF	U.S. Air Force
USDI	U.S. Department of Interior
USFWS	U.S. Fish and Wildlife Service
VRM	Visual Resource Management

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